

213
27.8.70

THE AMERICAN JOURNAL OF PSYCHIATRY

PUBLISHED BY

THE AMERICAN PSYCHIATRIC ASSOCIATION

EDITOR

CLARENCE B. FARRAR, M.D., 216 St. Clair Avenue West, Toronto 5, Ont.

BUSINESS MANAGER

AUSTIN M. DAVIES, Ph.B., 1270 Avenue of The Americas, New York 20, New York

ASSOCIATE EDITORS

WILLIAM RUSH DUNTON, JR., M.D.

FRANKLIN G. EBAUGH, M.D.

STANLEY COBB, M.D.

S. SPAFFORD ACKERLY, M.D.

LEO KANNER, M.D.

LAUREN H. SMITH, M.D.

KARL M. BOWMAN, M.D.

WALTER L. TREADWAY, M.D.

JOHN C. WHITEHORN, M.D.

PAUL H. HOCH, M.D.

TITUS H. HARRIS, M.D.

FRANCIS J. GERTY, M.D.

EDITORIAL ASSISTANTS

ANNE F. CARNWATH, B.A.

SYLVIA L. LAMBERT, B.A.

FORMER EDITORS

1844-1931

AMARIAH BRIGHAM, M.D.

G. ALDER BLUMER, M.D.

T. ROMEYN BECK, M.D.

RICHARD DEWEY, M.D.

EDWARD N. BRUSH, M.D.

JOHN P. GRAY, M.D.

HENRY M. HURD, M.D.

VOLUME 114



"The care of the human mind is the most noble branch of medicine."—GROTIUS

BALTIMORE

1957-1958



THE LORD BALTIMORE PRESS, INC.
BALTIMORE, MD., U. S. A.

Bureau Ednl. Pay. Research
DAVID H. L. LIVING DOTTEN
Dated 27. 8. 70
Ass. No. 9 213



THE AMERICAN PSYCHIATRIC ASSOCIATION

OFFICERS 1957-1958

President: HARRY C. SOLOMON
Secretary: WILLIAM MALAMUD

President-Elect: FRANCIS J. GERTY
Treasurer: JACK R. EWALT

COUNCILLORS

For 3 years
FRANCIS J. BRACELAND
ADDISON DUVAL
C. H. HARDIN BRANCH
JACQUES, GOTTLIEB

For 2 years
R. FINLEY GAYLE, JR.
NORMAN Q. BRILL
DONALD G. McKERRACHER
HOWARD P. ROME

For 1 year
HERBERT S. GASKILL
HARVEY J. TOMPKINS
S. BERNARD WORTIS
ARTHUR P. NOYES

EXECUTIVE COMMITTEE

HARRY C. SOLOMON
FRANCIS J. GERTY
WILLIAM MALAMUD

JACK R. EWALT
FRANCIS J. BRACELAND
HOWARD P. ROME

ASSEMBLY OF DISTRICT BRANCHES

DAVID C. WILSON
(Speaker)

WALTER H. OBENAU
(Deputy Speaker)

JOHN R. SAUNDERS
(Recorder)

MEDICAL DIRECTOR

DANIEL BLAIN, 1785 Massachusetts Ave., N. W., Washington 6, D. C.

EXECUTIVE ASSISTANT

AUSTIN M. DAVIES, 1270 Avenue of the Americas, New York 20, N. Y.

CHAIRMEN OF COMMITTEES

ANNUAL COMMITTEES

Arrangements
ALFRED AUERBACK

Nominating
HENRY W. BROSLIN

STANDING COMMITTEES
(Internal Activities of the Association)

Budget
ROBERT H. FELIX

Constitution and By-Laws
HENRY A. DAVIDSON

Ethics
S. SPAFFORD ACKERLY

Membership
JOHN J. MADDEN

Program
KARL M. BOWMAN

HOUSE COMMITTEE
ADDISON M. DUVAL

STANDING COMMITTEES
(Technical Aspects)
FRANK J. CURRAN
Coordinating Chairman

Aging
EWALD W. BUSSE

Child Psychiatry
J. FRANKLIN ROBINSON

History of Psychiatry
J. SANBOURNE BOCKOVEN

Medical Education

GEORGE C. HAM

Medical Rehabilitation

BENJAMIN SIMON

Mental Deficiency

GALE H. WALKER

Public Health

JOHN J. BLASKO

Research

ROBERT A. CLEGHORN

Therapy

PAUL H. HOCH

STANDING COMMITTEES
(Professional Standards)

WILFRED BLOOMBERG

Coordinating Chairman

Relations with Psychology

PAUL E. HUSTON

Legal Aspects of Psychiatry

LOUIS P. GENDREAU

Nomenclature and Statistics

MOSES FROHLICH

Standards and Policies of Hospitals and Clinics

HARVEY J. TOMPKINS

Psychiatric Nursing

GRANVILLE L. JONES

Psychiatric Social Work

MAURICE FRIEND

Private Practice

JOHN M. COTTON

Liaison with the American Hospital Association

RAYMOND W. WAGGONER

STANDING COMMITTEES
(Community Aspects)

PAUL V. LEMKAU

Coordinating Chairman

Academic Education

BRYANT M. WEDGE

Industrial Psychiatry

RALPH T. COLLINS

International Relations

IAGO GALDSTON

Co-operation with Leisure Time Agencies

ALEXANDER REID MARTIN

National Defense

BENJAMIN H. BALSER

Preventive Psychiatry

LLOYD J. THOMPSON

Disaster and Civil Defense

CALVIN S. DRAYER

Public Information

HENRY P. LAUGHLIN

Veterans

DAVID F. FLICKER

SPECIAL COMMITTEE
Certification of Mental Hospital Administrators
WINFRED OVERHOLSER

AMERICAN JOURNAL OF PSYCHIATRY

INFORMATION FOR CONTRIBUTORS

Manuscripts—The *original* manuscripts of papers read at the annual meetings of the Association should be deposited with the Secretary during the meetings, or sent to the New York office promptly afterward. Do not deposit carbon copies.

Papers read at the annual meetings become the property of the Association. Not all papers read, however, can be published in the JOURNAL, and authors wishing to publish in other vehicles will first secure from the Editor the release of their manuscripts.

Papers will not be accepted for the annual program if they have been previously read at other meetings or if they have been already published.

Papers contributed during the year (not on the annual program) should be sent to the Editor, Dr. Clarence B. Farrar, 216 St. Clair Avenue West, Toronto 5, Ontario, Canada.

Style—Manuscripts should be typewritten, double spaced, on one side of paper. They must be prepared in conformity with the general style of The American Journal of Psychiatry. Retain a carbon copy of manuscript and duplicates of tables, figures, etc., for use should the originals be lost in the mails.

Multiple Authorship—The number of names listed as authors should be kept to a minimum, others collaborating being shown in a footnote.

Illustrations—Authors will be asked to meet printer's costs of reproducing illustrative material. Copy for illustrations cannot be accepted unless properly prepared for reproductions. Wherever possible, drawings and charts should be made with India ink for photographic reproduction as zinc etchings. Photographs for halftone reproduction should be glossy prints. Illustrations should be as small as possible without sacrificing important detail. Redrawing or preparing illustrations to make them suitable for photographic reproduction will be charged to author.

Authors' Corrections in Proofs—Corrections, additions or deletions made by authors are to be charged to them. These alterations are charged on a time basis at the rate of \$3.00 per hour. Proper editing of original manuscript is important to avoid the expense of correction.

Tables—Tables should be typed and on separate sheets. Tables are much more expensive to set than text material and should be used only where necessary to clarify important points. Authors will be asked to defray cost of excessive tabular material.

References—References should be assembled according to author in a terminal bibliography, referred to in text by numbers in parentheses. Bibliographical material should be typed in accordance with the following style for journals and books respectively:

1. Vander Veer, A. H., and Reese, H. H. *Am. J. Psychiat.*, 95: 271, Sept. 1938.
2. Hess, W. R. *Diencephalon*. New York: Grune & Stratton, 1954.

Abbreviations should conform to the style used in the Quarterly Cumulative Index Medicus.

The American Journal of Psychiatry, formerly The American Journal of Insanity, the official organ of The American Psychiatric Association, was founded in 1844. It is published monthly, the volumes beginning with the July number.

The subscription rates are \$12.00 to the volume: Canadian subscriptions, \$12.50; foreign subscriptions, \$13.00, including postage. Rates to medical students, junior and senior internes, residents in training during their first, second, or third training year, and also to graduate students in psychology, psychiatric social work, and psychiatric nursing, \$5.00 (Canada \$5.50). Single issues, \$1.25.

Copyright 1956 by The American Psychiatric Association
Office of Publication, 1601 Edison Highway, Baltimore 13, Md.

Editorial communications, books for review, and exchanges should be addressed to the Editor, Dr. Clarence B. Farrar, 216 St. Clair Avenue West, Toronto 5, Ontario, Canada.

Business communications, remittances and subscriptions should be addressed to The American Psychiatric Association, 1601 Edison Highway, Baltimore 13, Md., or to 1270 Avenue of the Americas, New York 20, N. Y.

Entered as second class matter July 31, 1911, at the post office at Baltimore, Maryland, under the Act of March 3, 1879. Acceptance for mailing at special rate of postage provided for in Section 1103, Act of October 3, 1917. Authorized on July 3, 1918.

CONTENTS OF VOLUME 114

JULY, 1957

PRESIDENTIAL ADDRESS. <i>Francis J. Braceland.</i>	1	Psychiatry, 83. Dr. Heinicke Receives Hofheimer Prize, 83. Dr. Hoffman Dies, 83. International Society for Psychopharmacology, 83. Joint Meeting of Royal Society of Medicine and Medico-Psychological Society, 84. Electroshock Research Association, 84. American Nurses' Foundation, Inc., 84. N. Y. State Crusade Against Chronic Alcoholism, 84. Charles Frederick Menninger Award, 84. National League for Nursing, 84. Milwaukee Neuro-Psychiatric Society, 85. New York Builds State Mental Hospital, 85. Status and Improvement of Clinical Drug Evaluation Reports, 85. New Jersey Neuro-Psychiatric Institute, 85. First American Congress of Legal Medicine and Law-Science Problems, 86. First National Health Survey, 86. Bibliography of Group Psychotherapy, 86. Psychiatric Glossary, 86. Psychiatric Research Reports No. 6, 86.	
FRANCIS J. BRACELAND, M.D., PRESIDENT—1956-57. A Biographical Sketch. <i>Howard P. Rome</i>	10	OFFICIAL REPORTS:	
EFFECT ON BEHAVIOR IN HUMANS WITH THE ADMINISTRATION OF TARAXEIN. <i>Robert G. Heath, Sten Martens, Byron E. Leach, Matthew Cohen, and Charles Angel</i>	14	Coordinating Committee on the Technical Aspects of Psychiatry.....	87
THE EFFECT OF CULTURE CHANGE ON THE NEGRO RACE IN VIRGINIA, AS INDICATED BY A STUDY OF STATE HOSPITAL ADMISSIONS. <i>David C. Wilson and Edna M. Lantz</i> ...	25	BOOK REVIEWS:	
PSYCHIATRIC MANAGEMENT OF SUICIDE PROBLEMS IN MILITARY SERVICE. <i>William Ofenkranz, Edwin Church, and Robert Elliott</i>	33	Sleep, <i>Marie Stopes</i>	90
THE ROLE OF THE PSYCHIATRIST IN TEACHING COMPREHENSIVE MEDICAL CARE. <i>Donald C. Greaves</i>	42	Klinische Elektropathologies. <i>S. Koeppen and F. Panse</i>	91
BEHAVIOR SYMPTOMS IN CHILDREN AND DEGREE OF SICKNESS. <i>John C. Glidewell, Ivan N. Mensh, and Margaret C.-L. Gildea</i>	47	A Manual of Psychiatry (3rd Ed.) <i>K. R. Stalkworthy</i>	91
NEUROPSYCHIATRIC ASPECTS OF ACUTE POLIO-MYELITIS. <i>Jimmie C. B. Holland and Martin R. Coles</i>	54	Fragments of an Analysis with Freud. <i>Joseph Wortis</i>	92
ADMINISTRATIVE PSYCHIATRY: A New Field—Challenging and Rewarding. <i>William B. Terhune</i>	64	Medical Aspects of Traffic Accidents. Edited by <i>Harold Elliott</i>	92
RAPID TREATMENT OF THE PSYCHOTIC PATIENT INTEGRATING ELECTRONARCOSIS AND PSYCHOANALYTIC PSYCHOTHERAPY. <i>Esther Bogen-Tiets and Jo H. Jordan</i>	68	Lewis Carroll. <i>Derek Hudson</i>	93
CLINICAL NOTES:		The Clinical Interview. Vol. II: Therapy. <i>Felix Deutsch and William F. Murphy</i> ..	94
Observations Upon the Therapeutic Use of Benactyzine Suavetil. <i>Vernon Kinross-Wright and John H. Moyer</i>	73	A Guide to Psychiatric Books (2nd Ed.). <i>Karl A. Menninger</i>	95
The Dual Action of the Tranquilizers. <i>Joseph A. Barsa</i>	74	Transvestism: Men in Female Dress. <i>David O. Cauldwell</i>	95
CORRESPONDENCE:		Methodische Problem der Klinischen Psychotherapie. <i>Deitrich Langen</i>	95
Electroshock Therapy	76	Das Autogen Training (Konzentrativer Selbstentspannung) (9th Ed.). <i>J. H. Schultz</i>	95
High Cost of Analytic Training.....	78	Electrodiagnosis and Electromyography. <i>Sidney Licht</i>	96
COMMENT:		Rorschach Location and Scoring Manual. <i>Leonard Small</i>	96
The Chicago Meeting.....	79		
NEWS AND NOTES:			
National Committee Against Mental Illness, Inc., 82. Devereux Dinner and Program, 82. North Pacific Society of Neurology and Psychiatry, 82. The American Board of Psychiatry and Neurology, Inc., 82. First Canadian Mental Hospital Institute, 82. Dr. Guttmacher Isaac Ray Lecturer, 83. Foundations' Fund for Research in			

AUGUST, 1957

EUROPEAN AND BRITISH PSYCHIATRY. <i>T. Ferguson Rodger</i>	97
INTERNATIONAL PSYCHIATRY. <i>Iago Goldston</i> ..	103
AMERICAN PSYCHIATRY. <i>John C. Whitehorn</i> ..	109
GROWTH AND AGING. <i>Edward L. Borts</i>	114
PERCEPTION AND INTERPERSONAL RELATIONS. <i>Hadley Cantril</i>	119
EXPERIENCE WITH PHOTIC STIMULATION IN PSYCHIATRIC RESEARCH. <i>George A. Ulett</i>	127
METHODS EMPLOYED AND RESULTS OBTAINED IN PSYCHIATRIC STUDIES WITH NEW DRUGS ACTING ON THE BRAIN STEM. <i>F. A. Mielke</i>	134
TRANSORBITAL LEUCOTOMY IN NONINSTITUTIONAL CASES. <i>Abraham Gardner</i>	140
CLINICAL EVALUATION OF PACATAL. <i>Paul E. Feldman</i>	143
THE DEFECTIVE DELINQUENT. <i>Peter W. Bowman</i>	147
IS THE HUMAN PERSONALITY MORE PLASTIC IN INFANCY AND CHILDHOOD? <i>Ian Stevenson</i>	152
DUPLICATION, DOUBLE ORIENTATION AND FUSION. <i>Max Levin</i>	162
NARCOTIC BONDAGE: A General Theory of the Dependence on Narcotic Drugs. <i>Sandor Rado</i>	165
CLINICAL NOTES:	
Detection of Chlorpromazine in Body Fluids. <i>Daniel J. Cavanaugh and Frank R. Ervin</i>	171
Cerebrospinal Fluid Neuraminic Acid Deficiency in Schizophrenia. <i>Samuel Bogoch</i>	172
Possible Synergistic Action of Chlorpromazine, Reserpine, and Frenquel. <i>J. William Silverberg and Alexander Gralnick</i> ..	173
Perphenazine—A Drug Modifying Consciousness. <i>N. L. Mason-Browne</i>	173

RESEARCH NOTES:

Investigation of the Oedipus Phantasy by Hypnosis. <i>W. Earl Biddle</i>	175
CORRESPONDENCE: <i>Oscar Wilde</i>	176
PRESIDENT'S PAGE	178
COMMENT	179
OFFICIAL REPORTS	181

NEWS AND NOTES:

New York City Community Mental Health Board, 185. Psychiatric Rehabilitation Institute, Duke University, 185. Medical Association of South Africa, 185. Institute of Psychiatric Treatment, Philadelphia, Pa., 185. Scholarships for Teachers of Blind Children, 185. Administrative Appointments, N. Y. State Department of Mental Hygiene, 186. Adolf Meyer Memorial Awards, 186. North Shore Hospital Lecture Series, 186. Honors for Dr. Kanner, 186. Illinois Psychiatric Society, 186. Delaware Psychiatric Society, 186. American Society for Public Administration, 187. Psychiatry in New Zealand, 187. New Jersey Neuro-Psychiatric Institute, 187. Southern Mental Health Council, 187. A.C.L.S. Aid to the Humanities, 187.

BOOK REVIEWS:

Psychische Hygiene. Edited by <i>Erwin Stransky and Ernst Bresina</i>	189
Crestwood Heights: A Study of the Culture of Suburban Life. <i>John R. Seeley, R. Alexander Sim, and Elisabeth W. Loosley</i>	190
Judaism and Psychiatry. Edited by <i>Simon Noveck</i>	190
How to Improve Your Mind. <i>Baruch Spinoza</i>	190
Group of Contemporary German Book Reviews. <i>Hans A. Illing</i>	191

SEPTEMBER, 1957

THE EVALUATION OF THE EFFECTS OF DERIVATIVES OF RAUWOLFIA IN THE TREATMENT OF SCHIZOPHRENIA. <i>William Malamud, Walter Barton, A. M. Fleming, P. McK. Middleton, Tobias T. Friedman, and M. J. Schleifer</i>	193
A BIOCHEMICAL EVALUATION OF THE ACTIVITY OF CERTAIN TRANQUILIZERS AND THEIR RELATIONSHIP TO HORMONAL FUNCTION. <i>Malcolm Gordon, William Zeller, and John Donnelly</i>	201
THE PHYSIOLOGIC BASIS OF THE MANIC DEPRESSIVE ILLNESS: A THEORY. <i>S. H. Kraines</i>	206
STUDIES IN HUMAN ECOLOGY. <i>Lawrence E. Hinkle, Jr., et al.</i>	212
SOME INTERRELATIONS OF SOCIAL FACTORS AND CLINICAL DIAGNOSIS IN ATTEMPTED SUICIDE: A STUDY OF 109 PATIENTS. <i>Eli Robins, Edwin H. Schmidt, and Patricia O'Neal</i>	221

BROMIDE INTOXICATION AND QUANTITATIVE DETERMINATION IN SERUM. <i>Sidney J. Tillim</i> ..	232
TWO-YEAR FATE STUDY OF THORAZINE-TREATED PATIENTS. <i>Paul E. Feldman</i>	237
THE INTRAFAMILIAL ENVIRONMENT OF SCHIZOPHRENIC PATIENTS: II. MARITAL SCHISM AND MARITAL SKEW. <i>Theodore Lids, Alice R. Cornelison, Stephen Fleck, and Dorothy Terry</i>	241
THE PHYSICIAN AND TESTAMENTARY CAPACITY. <i>Gene L. Usdin</i>	249
USE OF MILTOWN (MEPROBAMATE) WITH PSYCHOTIC PATIENTS. <i>Veronica M. Pennington</i>	257
CLINICAL NOTES:	
The Effect of a Special Diet on Hospitalized Schizophrenic Patients. <i>Samuel Bogoch</i>	261
Mepazine (Pacatal)—Further Report. <i>Norbert Bruckman, Murray Kitchener, John C. Saunders, and Nathan S. Kline</i>	262

Serum Lipoprotein Concentrations in a Schizophrenic Population. <i>Edward H. Strisover, Oliver deLalla, John W. Goffman, and Beverly Strisover</i>	263	Southern Regional Council on Mental Health, 283. Rubin Foundation Award to Dr. Hoch, 283. Dr. Hunt Heads Hudson River State Hospital, 283. The American Neurological Association, 283. S.K.F. Foundation Fellowships, 283. Award to Dr. Silverman, 284. Postgraduate Course in Psychosomatic Medicine, 284. Psychiatric Research Reports No. 7, 284. Academy of Psychosomatic Medicine, 284.
PROCEEDINGS OF THE AMERICAN PSYCHIATRIC ASSOCIATION:		BOOK REVIEWS:
The One-Hundred and Thirteenth Annual Meeting, Chicago, Illinois, 1957.....	266	Crime, Courts and Probation. <i>Charles Lionel Chute and Marjorie Bell</i>
The American Board of Psychiatry and Neurology, Inc.....	276	Mental Health and Human Relations in Industry. Edited by <i>T. M. Ling</i>
OFFICIAL NOTICE:	277	IN MEMORIAM:
COMMENT:		Alan Gregg
Crime and Punishment.....	280	
Veterans Administration Program Changes.	281	
NEWS AND NOTES:		
The World Medical Association, 283.		

OCTOBER, 1957

FELLOWSHIP LECTURE: EUGEN BLEULER AND PRESENT-DAY PSYCHIATRY. <i>Gregory Zilboorg</i>	299	<i>Harry Vanderkamp, Anne Norgan, Gladys W. Wilkinson, and David Pearl</i> ..	365
RESPONSE TO FELLOWSHIP LECTURE ON EUGEN BLEULER. <i>E. E. Krafft</i>	299	Unexpected Asphyxial Death and Tranquilizing Drugs. <i>Leo E. Hollister</i>	366
MURDER BY ADOLESCENTS WITH OBSCURE MOTIVATION. <i>A. Warren Stearns</i>	303	HISTORICAL NOTES: I Remember C. K. Clarke.....	368
THE UNLOCKING OF WARDS IN MENTAL HOSPITALS. <i>L. C. Hurst</i>	306	CORRESPONDENCE: Electroshock and Hypothalamic Syndrome.	371
A STUDY OF THE EFFECTS OF L.S.D.: PHYSIOLOGIC AND PSYCHOLOGICAL CHANGES AND THEIR INTERRELATIONS. <i>Alberto DiMascio, Milton Greenblatt, and Robert W. Hyde</i> .	309	Benactyzine (Suavetil).	371
THERAPEUTIC AND TOXIC EFFECTS OF CHLORPROMAZINE AMONG 3,014 HOSPITALIZED CASES. <i>Reuben Cares, Edward Asrican, Maurice Fenichel, Paul Sack, and Jean Severino</i>	318	Drug Fatalities.	371
THE ANTIDOTAL ACTION OF SODIUM SUCCINATE IN THE MESCALINE PSYCHOSIS. <i>Ian Stevenson and Andrew J. Sanchez</i>	328	Wagner-Jauregg.	372
THE PLACE OF RESERPINE IN THE TREATMENT OF THE CHRONIC PSYCHOTIC PATIENT. <i>Charles P. Gore, George P. Egan, and Donald Walton</i>	333	Electroshock Therapy.	372
CHRONIC PSYCHOSIS FOLLOWING EPILEPSY. <i>J. E. A. Bartlett</i>	338	COMMENT: Idea and Act.....	374
A STUDY OF THE TRANSFER OF LONG-HOSPITALIZED PATIENTS TO A CONVALESCENT SERVICE. <i>Frederick Phillips and Sophia Belle May</i>	344	Information Values.	375
EFFECTIVE UTILIZATION OF ELECTRIC CONVULSIVE TREATMENT. <i>Peter F. Regan</i>	351	California Mental Health Services.....	376
SENSORY DEPRIVATION. A Review. <i>Philip Solomon, P. Herbert Leiderman, Jack Mendelson, and Donald Wexler</i>	357	NEWS AND NOTES: Public Health Mission to Russia, 377. Postgraduate Center for Psychotherapy, 377. Death of Dr. Lowrey, 377. Regional Research Conference, Montreal, 377. Information for Relatives of Hospital Patients, 377. International Association of Applied Psychology, 378. The American Psychosomatic Society, 378. New York State Legislation Concerning Mental Retardation, 378. Problems of Aging, 378. Connecticut Postgraduate Seminar in Psychiatry and Neurology, 378. Eastern Psychiatric Research Association Papers, 379. Dr. Tyhurst Goes to the University of British Columbia, 379. Dr. Sloane to Head Psychiatry at Queens University, 379. Salmon Lectures 1957, 379. Eastern Psychiatric Research Association Officers, 379.	
CLINICAL NOTES: A Comparison of Phenaglycodol (Ultram) Meprobamate and a Placebo in Abstinent Alcoholics. <i>Jackson A. Smith, Avonell Rutherford, and Rita Fanning</i>	364	BOOK REVIEWS: Die Beurteilung der Zurechnungsfähigkeit (3rd Ed.) <i>Kurt Schneider</i>	380
The Mecholyl Test as a Predictor of Improvement in Insulin Coma Therapy.		Aspects de la Psychiatrie Moderne. <i>Jean Delay</i>	380
		The Circle of Guilt. <i>Frederic Wertham</i> ...	381
		Hearing Therapy for Children. <i>Alice Streng, et al.</i>	382

A Doctor's Book of the Hours. <i>Merrill Moore</i>	383
American Literature and the Dream. <i>Fred-eric I. Carpenter</i>	383

The Direction of Human Development: Biological and Social Bases. <i>M. F. Ashley Montagu</i>	383
Social Problem of Mental Deficiency. <i>N. O'Connor and J. Tizard</i>	384

NOVEMBER, 1957

PSYCHIATRIC NOSOLOGY: FROM HIPPOCRATES TO KRAEPELIN. <i>Ilza Veith</i>	385
THE THREAT OF CLARITY. <i>Garrett Hardin</i>	392
LOGICAL ANALYSIS. <i>John R. Reid</i>	397
THE PROBLEM OF PSYCHIATRIC NOSOLOGY: A Contribution to a Situational Analysis of Psychiatric Operations. <i>Thomas S. Szasa</i>	405
PSYCHIATRY IN POST-WAR GERMANY. <i>H. Ehrhardt</i>	414
AN ENGLISH VIEW OF AMERICAN PSYCHIATRY. <i>Michael Shepherd</i>	417
CORRECTION AND RETRIBUTION IN THE CRIMINAL LAW. <i>Lawrence Friedman</i>	421
REPLY TO DR. FRIEDMAN. <i>Richard G. Board</i> ..	424
SOME PSYCHIATRIC NOTES ON THE ANDREA DORIA DISASTER. <i>Paul Friedman and Louis Linn</i>	426
GROUP PSYCHOTHERAPY: INDIVIDUAL DYNAMICS IN A GROUP PROCESS. <i>Marvin K. Opler</i> ..	433
NORMAL DEVIATIONS FROM REALITY. <i>Claude C. Bowman</i>	439
RELATIONSHIP BETWEEN SOCIAL ATTITUDES TOWARD AGING AND THE DELINQUENCIES OF YOUTH. <i>Maurice E. Linden</i>	444
FOLLOW-UP STUDY ON THORAZINE TREATED PATIENTS. <i>Else B. Kris and Donald M. Carmichael</i>	449
RESULTS OF FOUR YEARS ACTIVE THERAPY FOR CHRONIC MENTAL PATIENTS AND THE VALUE OF AN INDIVIDUAL MAINTENANCE DOSE OF ECT. <i>Gunther E. Wolf</i>	453
PSYCHOPHYSIOLOGICAL GASTROINTESTINAL REACTIONS. <i>Vincent Edward Lascara</i>	457
CLINICAL NOTES:	
A Preliminary Report on Marsilid. <i>Frank J. Ayd, Jr.</i>	459
Treatment of Psychoses With a Combination of Pacatal and Thorazine. <i>Manfred Braun</i>	460
The Use of Hexafluorodiethyl Ether (Indoklon) as an Inhalant Convulsant. <i>Augusto Esquibel, John C. Krantz, Jr., Edward B. Truitt, and Albert A. Kurland</i>	461
CASE REPORTS:	
A Case of Agranulocytosis Following "Sparine" Administration. <i>Melvin J. Reinhart, Bernard S. Silverstein, and Thomas N. Cross</i>	462
"Paradoxical" Effect of Chlorpromazine in a Case of Periodic Catatonia. <i>Walter Kruse</i>	463
Agranulocytosis During Treatment With Methylpromazine. <i>Paul E. Feldman and Jerome Stalman</i>	464

COMMENT:

On the Occasion of Erwin Stransky's 80th Birthday	466
Second International Congress For Psychiatry	467
Chemical Concepts of Psychosis.....	468

OFFICIAL NOTICES:

Treatment of Acute Emotional Disorders Under the Dependents' Medical Care Program For the Dependents of Members of the Uniformed Services.....	469
--	-----

NEWS AND NOTES:

Psychopharmacology Service Center, N.I.M.H., 471. Western Divisional Meeting A.P.A., 471. Financial Aid to Mental Health Students, 471. American Occupational Therapy Association, 471. 5th International Congress of Internal Medicine, 472. American Public Health Association, Inc., 472. Bibliography of Medical Reviews, Vol. 2, 472. Dr. Warner Heads Craig Colony, 472. National Foundation For Infantile Paralysis, 473. Treatment of Juvenile Delinquents, California, 473. Des Moines Child Guidance Center, 473. Cerebral Vascular Disease and Strokes, 473. Study Center For Mentally Retarded Children, Buffalo, N. Y., 473. Social Work Grants, University of Denver, Colo., 474. American Public Health Association Annual Meeting, 474. World Medical Periodicals, 474.

BOOK REVIEWS:

Psychical Research. <i>R. C. Johnson</i>	475
Mental Hygiene (Rev. Ed.). <i>D. B. Klein</i>	476
Epilepsy and the Law. <i>Roscoe L. Barrow and Howard D. Fabing</i>	477
J.A.M.A. Clinical Abstracts of Diagnosis and Treatment. American Medical Association.	477
Clinical Examinations in Neurology. <i>James A. Bastron, et al.</i>	477
Atlas of Neuropathology. <i>Nathan Malamud</i>	478
The Year Book of Neurology, Psychiatry, and Neurosurgery, 1956-1957. Edited by <i>Roland P. Mackay, S. Bernard Wortis, and Oscar Sugar</i>	478
Taboo. <i>Franz Steiner</i>	479
Current Therapy, 1957. Edited by <i>Howard F. Conn</i>	479
Atypische Psychosen. <i>Bernhard Pauleikhoff</i>	479
Explorations in Awareness. <i>J. Samuel Bois</i>	480
Understanding Human Behavior. <i>James L. McCartney</i>	480

DECEMBER, 1957

PSYCHIATRIC FACILITIES IN PRISONS AND CORRECTIONAL INSTITUTIONS IN THE UNITED STATES. <i>Warren S. Wille</i>	481	Wagner-Jauregg and the "Priority" of Producing Artificial Fever For Treatment of General Paresis	561
OBSERVATIONS ON THE THERAPEUTIC ASPECTS OF ADMINISTRATION IN PUBLIC MENTAL HOSPITALS. <i>Walter E. Barton</i>	488	NEWS AND NOTES:	
CONTRIBUTIONS OF SOCIAL SCIENCE TO THE ADMINISTRATIVE PROCESS IN THE MENTAL HOSPITAL. <i>Morris S. Schwartz</i>	493	Summary of Second International Congress for Psychiatry, September 1-7, 1957, 563.	
HEALTH INSURANCE AND PSYCHIATRIC COVERAGE. Compiled by <i>Henry A. Davidson</i> ...	498	American Heart Association, 564. Dangers of Tranquilizers in Tablet Form, 564.	
A POINT OF VIEW AS TO THE NATURE OF SCHIZOPHRENIA. <i>Nathan S. Kline</i>	505	Fourth Annual Institute of Child Psychiatry, 564. The Woods Schools, 564.	
ANALYSIS OF 1955-1956 POPULATION FALL IN NEW YORK STATE MENTAL HOSPITALS IN FIRST YEAR OF LARGE-SCALE USE OF TRANQUILIZING DRUGS. <i>Henry Brill and Robert E. Patton</i>	509	Recommendations for Reporting Studies of Psychiatric Drugs, 564. Judge Bazelon Honored, 565. "World of Medicine" Television Series, 565. National League for Nursing, 565. U.S.P.H.S. Awards for Research in Neurological and Sensory Disorders, 565. The Hofheimer Prize, 566. Revista de Ciencias Sociales, 566.	
TREATMENT OF PARKINSONISM: Preliminary Report on Use of Promethazine in 12 Cases. <i>Eliere J. Tolan and John Olariu</i> .	518	Western New York Psychiatric Society, 566. Dr. Pasamanick Chairs Committee on Nomenclature, 566. Dr. Braceland Honored, 567. Second World Conference on Medical Education, 567. Graduate School of Psychiatry, New York State University, 567. The A. E. Bennett Award, 567. Conference on Rehabilitation of the Mentally Ill.: Social and Economic Aspects, 568. Adolf Meyer Memorial Awards, 1957, 568. Retirement of Dr. Lewis, 568. American Group Psychotherapy Association, 568.	
MEPROBAMATE: A CLINICAL STUDY. <i>Abraham Gardner</i>	524	BOOK REVIEWS:	
HYSTERICAL STIGMATIZATION. <i>Joseph E. Lifschutz</i>	527	Management of Emotional Problems in Medical Practice. Edited by <i>Samuel Lieberman</i>	569
DIFFERENTIAL EFFECTS OF FACTORS IN AN ACTIVITY THERAPY PROGRAM. <i>David Levine, Harry K. Marks, and Richard Hall</i>	532	Psychotherapy and Counseling. <i>Lawrence K. Frank, et al.</i>	569
THE SOCIAL MALADJUSTMENT UNIT: A COMMUNITY WIDE APPROACH TO THE PROBLEM OF DELINQUENT BEHAVIOR. <i>Nathan Blackman, Thomas T. Flynn, Thomas P. Melican, John G. Napoli, and James M. A. Weiss</i>	536	The Rhythm of Epileptic Attacks and Its Relationship to the Menstrual Cycle, <i>Ruben Almquist</i>	569
A BIO-PSYCHOLOGICAL APPROACH TO SOMATIC TREATMENTS IN PSYCHIATRY. <i>Gordon T. Heistad</i>	540	A Modern Pilgrim's Progress for Diabetics. <i>Garfield G. Duncan</i>	570
A METHOD FOR STUDYING THE ORGANIZATION OF TIME EXPERIENCE. <i>John S. Kafka</i>	546	Special Education for the Exceptional Child, Vol. III. Edited by <i>M. E. Frampton and E. D. Gall</i>	570
CLINICAL NOTES:		Studies in Topectomy. Edited by <i>Nolan D. C. Lewis, Carney Landis, and H. E. King</i>	572
A Clinical Appraisal of Trilafon. <i>Frank J. Ayd, Jr.</i>	554	Drug Addiction in British Columbia. Edited by <i>George Stevenson</i>	572
A Statistical Comparison of Two Methods of ECT. <i>Peter D. King</i>	555	Student Mental Health: An Annotated Bibliography, 1936-1955. <i>Daniel H. Funkenstein and George H. Wilkie</i>	572
An Interesting Reaction to a Tranquilizer: Tonic Seizures with Perphenazine (Trilafon). <i>Jay Shanon, Stanley M. Kaplan, Chester M. Pierce, and W. Donald Ross</i> .	556	Basic Psychology. <i>Leonard Carmichael</i> ...	573
CORRESPONDENCE:		IN MEMORIAM:	
Freud and Lay Psychoanalysis.....	557	William C. Sandy, M. D.—1876-1957.....	575
Schizophrenia	557		
COMMENT:			
Some Current Economic and Social Problems in Residency Training.....	559		

JANUARY, 1958

MULTIPLE APPROACHES TO TREATMENT IN SCHIZOPHRENIA AND DISCUSSION OF INDICATIONS. <i>Leo Alexander and Merrill Moore</i>	577	THE PRISON CODE. <i>Paul R. Miller</i>	583
		REVIEW OF PSYCHIATRIC PROGRESS 1957:	
		Heredity and Eugenics. <i>Franz J. Kallmann</i> .	586

Neuropathology, Endocrinology and Biochemistry. <i>O. R. Langworthy</i>	590	Ineffectiveness of Mepazine (Pacatal). <i>Herman C. B. Denber</i>	656
Electroencephalography. <i>W. T. Liberson</i> ..	593	HISTORICAL NOTES:	
Clinical Psychology. <i>Frederick Wyatt</i>	597	Sir Thomas Browne, <i>Religio Medici</i> , and the History of Psychiatry. <i>Jerome M. Schneck</i>	657
Clinical Psychiatry and Psychotherapy. <i>Paul H. Hoch and Nolan D. C. Lewis</i>	599	CORRESPONDENCE:	
Physiological Treatment. <i>Joseph Wortis</i> ..	603	Murder by Adolescents.....	661
Psychosurgery. <i>Walter Freeman</i>	608	COMMENT:	
Child Psychiatry. Mental Deficiency. <i>Leo Kanner and Leon Eisenberg</i>	609	Psychiatric Implications of the "Placebo Effect"	662
Clinical Neurology. <i>William H. Timberlake</i>	615	NEWS AND NOTES:	
Alcoholism and Geriatrics. <i>Karl M. Bowman</i>	621	Adolf Meyer Memorial Plaque Unveiled, 665. Honor for Dr. Dunton, 665. Psychiatric Graduate Training in Norway, 666. National Foundation for Infantile Paralysis, 666. Karen Horney Award, 666. Galesburg Research on Alcohol, 666. Commonwealth Fund 39th Annual Report, 666. Research Fellowships in Psychiatry, 667. Israel S. Wechsler Lecture, 667. Dr. Davidson Heads Overbrook Hospital, 667. Training in Mental Deficiency, 667. Death of Dr. Gayle, 667. American Society of Group Psychotherapy and Psychodrama, 667. Ford Foundation Grant to University of Pennsylvania, 668. Dr. Strecker Honored, 668. Report on Prochlorperazine, 668. Scientific Study of Sex, 668. Chronic Illness and Health of the Aged, 668. Rockland State Hospital Research Expansion, 668. Foundations' Fund for Research in Psychiatry, 669. The Alan Gregg Fund, 669. World Medical Association, 669. V. A. Institute in Psychiatry and Neurology at Little Rock, 670. Reason and Unreason in Psychotherapy, 670.	
Epilepsy. <i>Elizabeth G. French</i>	624	IN MEMORIAM:	
Mental Health in Education. <i>W. Carson Ryan</i>	626	Lawson Gentry Lowrey, M. D., 1890-1957.	671
Industrial Psychiatry. <i>Ralph T. Collins</i>	627		
Psychiatric Nursing. <i>Lavonne M. Frey</i>	630		
Rehabilitation and Occupational Therapy. <i>Franklin S. DuBois</i>	632		
Psychiatric Social Work. <i>Margaret L. Newcomb</i>	637		
Family Care and Outpatient Psychiatry. <i>Walter E. Barton</i>	638		
Forensic Psychiatry. <i>Winfred Overholser and William J. T. Cody</i>	642		
Administrative Psychiatry. <i>J. Martin Myers and Lauren H. Smith</i>	645		
Military Psychiatry. <i>Joseph S. Skobba</i>	647		
Psychiatric Education. <i>Franklin G. Ebaugh and Robert H. Barnes</i>	650		
CLINICAL NOTES:			
The Phrenotropic Action of Ritalin as Evaluated by an I.B.M. Rating Scale. <i>Veronica M. Pennington</i>	654		
Deanol (Deaner) A New Cerebral Stimulant for the Treatment of Neurasthenia and Mild Depression. <i>Frederick Lemere and James H. Lasater</i>	655		

FEBRUARY, 1958

HOMEOSTASIS DURING PUBERTY. <i>Flanders Dunbar</i>	673	HYSTERIA, THE HYSTERICAL PERSONALITY AND "HYSTERICAL" CONVERSION. <i>Paul Chodoff and Henry Lyons</i>	734
PHARMACOLOGICAL AND BIOLOGICAL PSYCHOTHERAPY. <i>Robert G. Heath, Byron E. Leach, Lawrence W. Byers, Sten Mariens, and Charles A. Feigley</i>	683	A NEW SYMBOL APPROACH TO PERSONALITY ASSESSMENT. <i>Theodore C. Kahn and Paul D. Murphy</i>	741
CERTAIN ASPECTS OF SEX PSYCHOPATH LAWS. <i>Karl M. Bowman and Bernice Engle</i>	690	PROGNOSTIC VALUE OF PERCEPTUAL DISTORTION OF TEMPORAL ORIENTATION IN CHRONIC SCHIZOPHRENICS. <i>John Lanskrone and W. Wolfson</i>	744
P.M.-G.M. SUCCINYLCHOLINE-MODIFIED ELECTROSHOCK THERAPY WITHOUT BARBITURATES. <i>David J. Impastato and Anthony R. Gabriel</i>	698	CLINICAL NOTES:	
OF SCHIZOPHRENIA AND THE SCHIZOPHRENIC. <i>Vernon Kinross-Wright and Eugen Kahn</i> .	703	Vesprin and Mopazine: Two New Phrenotropic Substances. <i>H. Asima, H. Durost, and C. Cahn</i>	747
BREATHING DEFICIT, ALLERGY, AND ALCOHOLISM. <i>Norman G. Hawkins</i>	707	Trifluopromazine and Trifluoperazine: Two New Tranquilizers. <i>L. H. Rudy, F. Rinaldi, E. Costa, H. E. Himwich, W. Tuteur, and J. Glotzer</i>	747
SCHOOL PHOBIA: A STUDY IN THE COMMUNICATION OF ANXIETY. <i>Leon Eisenberg</i>	712	Trinuride H: A New Antiepileptic Drug. Report on a Pilot Clinical Trial. <i>Stephen Krauss</i>	748
AN ANALYSIS OF THERAPEUTIC ARTFULNESS. <i>Walter Bromberg</i>	719	The Effect of Chlorpromazine in Reducing	
TOWARD AN INTEGRATIVE THERAPY OF THE FAMILY. <i>Nathan W. Ackerman</i>	727		

the Relapse Rate in 716 Released Patients: Study 3. <i>Benjamin Pollack</i>	749	er's Pupils and Colleagues Contribute to Burgholzi Library, 762. Report of the Nominating Committee, 762. Alfred P. Sloan Visiting Professorship, 762. Brooklyn Psychiatric Society, 762. American Orthopsychiatric Association, Inc., 763. Adler Memorial Issue of Journal of Individual Psychology, 763. Opening of the Ontario Hospital, North Bay, 763.
Chemotherapeutic Trials in Psychosis: III. 2-Brom-D-Lysergic Acid Diethylamide (BOL 148). <i>Wm. J. Turner and Sidney Merlis</i>	751	BOOK REVIEWS:
Adrenochrome in Blood Plasma. <i>A. Hofer</i>	752	The Sexual Criminal (2nd Ed.). <i>J. Paul de River</i>
HISTORICAL NOTES:		Emotional Hazards in Animals and Man. <i>Howard S. Liddell</i>
Theodorice Romeyn Beck. <i>Eric T. Carlson</i> .	754	Masked Epilepsy. <i>Hugh R. E. Wallis</i>
CORRESPONDENCE:		Mr. Lyward's Answer. <i>Michael Burn</i>
The Mental Health Book Review Index: An Answer to Dr. Kahn's Query	756	The CIBA Collection of Medical Illustrations. Vol. I: Nervous System with a Supplement on the Hypothalamus. <i>Frank H. Netter</i>
Oscar Wilde	757	The Conquest of Loneliness. <i>Eric P. Mosse</i> .
Idea and Act.....	758	IN MEMORIAM:
COMMENT:		Robert Finley Gayle, Jr., M. D., 1891-1957.
Equus et Machina.....	759	
PRESIDENT'S PAGE	760	
OFFICIAL NOTICES:		
Resolution on Relations of Medicine and Psychology	761	
NEWS AND NOTES:		
Neuro-Psychopharmacology, 762. Dr. Mey-		

MARCH, 1958

EUGEN BLEULER'S CONCEPT OF THE GROUP OF SCHIZOPHRENIAS AT MID-CENTURY. <i>Fritz A. Freyhan</i>	769	ment of Elderly Psychotic Patients. <i>Lionel H. Blackman, Abraham Glenn, and Leon Olinger</i>	837
A STUDY OF CASES OF SCHIZOPHRENIA TREATED BY "DIRECT ANALYSIS." <i>William A. Horwitz, Philip Polatin, Lawrence C. Kolb, and Paul H. Hoch</i>	780	Clinical Note Concerning Iproniazid (Marsilid). <i>Robert R. Schopbach</i>	838
FURTHER EXAMINATION OF DIAGNOSTIC CRITERIA IN SCHIZOPHRENIC ILLNESS AND PSYCHOSES OF INFANCY AND EARLY CHILDHOOD. <i>J. Louise Despert and Albert C. Sherwin</i>	784	Two-Year Follow-Up Study of the Relationship of Chlorpromazine and the Incidence of Convulsions in Fifty Post-Lobotomy Patients. <i>A. E. Paganini and M. Zlotow</i>	839
THE MISUSE OF THE DIAGNOSIS CHILDHOOD SCHIZOPHRENIA. <i>Hilde L. Mosse</i>	791	Treatment of Psychiatric Disorders with Triiodo-Thyronine. <i>Frederick F. Flack, Charles I. Celian, and Rulon W. Rawson</i> .	841
HISTORICAL ROOTS OF PSYCHOTHERAPY. <i>Nolan D. C. Lewis</i>	795	HISTORICAL NOTES:	
SOCIAL ASPECTS OF PSYCHOTHERAPY. <i>Fredrick C. Redlich</i>	800	The First Professor of Psychiatry—Samuel Mitchel Smith. <i>Philip C. Rond</i>	843
SOME GUIDING CONCEPTS IN DYNAMIC PSYCHOTHERAPY. <i>Oskar Diethelm</i>	805	CORRESPONDENCE:	
TREATMENT OF HOMOSEXUALITY BY INDIVIDUAL AND GROUP PSYCHOTHERAPY. <i>Samuel B. Hadden</i>	810	Chronic Psychosis Following Epilepsy.....	845
PSYCHOLOGICAL ASPECTS OF PREJUDICE WITH SPECIAL REFERENCE TO DESEGREGATION. <i>Harold I. Lief and Ian P. Stevenson</i>	816	Simulated Retardation	846
TOWARD A DEFINITION OF THE THERAPEUTIC COMMUNITY. <i>Harry A. Wilmer</i>	824	Psychical Research	846
CLINICAL NOTES:		COMMENT:	
A Controlled Study of the Habit Forming Propensities of Meprobamate. <i>John A. Ewing and Thomas M. Haislip</i>	835	A Realistic Approach to Training Research Personnel	849
Vasolastine in the Treatment of Arteriosclerosis. <i>A. J. Noordsij and Jackson A. Smith</i>	836	Therapeutic Community for Delinquents?..	850
Simplifying Chlorpromazine Maintenance Therapy. <i>Else B. Kris</i>	836	THE AMERICAN BOARD OF PSYCHIATRY AND NEUROLOGY, INC.	851
The Combined Use of a Tranquilizer, Sympathomimetic and Vitamins in the Treat-		NEWS AND NOTES:	
		Gracie Square Hospital, 853. The Adolf Meyer Awards, 853. American Society of Clinical Hypnosis, 853. Dr. Roberts Heads Verdun Protestant Mental Hospital, P. Q., 853. American Board of Psychiatry and Neurology, Inc., 853. The Collegium Internationale Neuro-Psychopharmacologicum, 854. Death of Dr. George Pratt, 854. The National Association of Recreational Therapists, 854. Protection Against Polio, 854. Basic Psychiatric Nursing Education Conferences, 854. Ar-	

chives of Criminal Psycho-dynamics Freud Issue, 855. Recreation for the Elderly, 855. Human Adaptation to Disaster, 855. Training in Group Relations, 855. World Medical Periodicals. 855. Re: Malthus, 855. Death of Dr. Margaret Smyth, 856. Indiana Mental Health Services, 856. National Association for Retarded Children, Inc., 856. American Orthopsychiatric Association, 856. Death of Dr. Young, 856.

BOOK REVIEWS:

- The Facts of Mental Health and Illness. *K. R. Stallworthy*..... 857
The Early Detection and Prevention of Disease. *John P. Hubbard*..... 857
The Mentally Retarded Patient. *Harold Michal-Smith* 857
Röntgendiagnostische Probleme bei Intra-kraniellen Geschwülsten und Elektroencephalographie und Corticographie bei Cerebralen Krampfleiden *Acta Neurochirurgica Supplementum III*..... 858

- Neurology and Psychiatry in Childhood. Edited by *Rustin McIntosh and Clarence C. Hare* 859
The CIBA Collection of Medical Illustrations. Vol. III: Liver, Biliary Tract and Pancreas. *Frank H. Netter*..... 859
Personality in Young Children. *Lois Barclay Murphy* 860
The Fields of Group Psychotherapy. Edited by *S. R. Slavson*..... 861
Internal Secretions of the Pancreas. Edited by *G. E. W. Wolstenholme and Cecilia M. O'Connor* 861
The Recovery Room. *Max Sudowe and James H. Cross*..... 862
The Prevention of Cruelty to Children. *Leslie George Housden*..... 862
Medizinische Psychologie. *Ernest Kretschmer* 863
IN MEMORIAM:
Frederick W. Parsons, M. D., 1875-1957... 864

APRIL, 1958

- MULTIDISCIPLINARY RESEARCH IN SCHIZOPHRENIA. *William Malamud and Winfred Overholser* 865
HISTORICAL LANDMARKS IN RESEARCH ON SCHIZOPHRENIA IN THE UNITED STATES. *W. K. McKnight*..... 873
SOME MOTOR ASPECTS OF SCHIZOPHRENIA: AN EMG STUDY. *George B. Whatmore and Richard M. Ellis, Jr.*..... 882
A PSYCHOSOMATIC STUDY OF ALLERGIC AND EMOTIONAL FACTORS IN CHILDREN WITH ASTHMA. *Robert T. Long, John H. Lamont, Babette Whipple, Louise Bandler, Gaston E. Blom, Leo Burgin, and Lucie Jessner* 890
CHARACTERISTICS OF AN ACUTE CONFUSIONAL STATE IN COLLEGE STUDENTS. *Helen B. Carlson* 900
AN EVALUATION OF FUNCTIONAL PSYCHOSES IN OLD AGE. *W. S. Williams and E. Gartly Jaco* 910
BEHAVIORAL CHANGES IN NONPSYCHOTIC VOLUNTEERS FOLLOWING THE ADMINISTRATION OF TARAXEIN, THE SUBSTANCE OBTAINED FROM SERUM OF SCHIZOPHRENIC PATIENTS. *Robert G. Heath, Sten Martens, Byron E. Leach, Matthew Cohen, and Charles A. Feigley* 917
THE "DOUBLE BLIND" METHOD: ITS PITFALLS AND FALLACIES. *Werner Tuleur*..... 921
CONTEMPORARY PSYCHIATRY IN PORTUGAL. *Henrique J. de Barahona Fernandes*.... 923
A NOTE ON PSYCHIATRIC DEVELOPMENTS IN THE SAN FRANCISCO BAY AREA. *Portia Bell Hume* 926
CLINICAL NOTES:
A Rapid Urinary Test for Chlorpromazine, Promazine and Pacatal: A Supplementary Report. *Fred M. Forrest, Irene S. Forrest, and Aaron S. Mason*..... 931
An Acceptable Nonbarbiturate Sedative and Hypnotic for Mental Patients in a State Institution. *Marianne W. Chermak*.... 932
A Clinical Trial of Marsilid in Psychotic Depressed Patients. *Antonio J. De Liz Ferreira and Harry Freeman*..... 933
Seizures During Therapy with Phenothiazine Derivatives. *Dougald D. McLean, Harold R. Martin, Robert J. Ellingson, and Jackson A. Smith*..... 934
The Effect of Cetadiol on Delirium Tremens, Alcoholic Hallucinoses, and Alcohol Withdrawal. *D. Wexler, P. H. Leiderman, J. Mendelson, P. Kubzansky, and P. Solomon*..... 935
Marsilid in Depression. *T. R. Robie*..... 936
The Effect of Chlorpromazine on the Behavior of Disturbed Children. *G. Gorham Lane, William G. Huber, and F. Loren Smith* 937
ADMINISTRATIVE NOTES:
A Method for Accelerating Discharge from State Hospitals. *Frederick B. Charatan, Herman C. B. Denber, and John H. Travis* 939
CASE REPORTS:
Fatal Agranulocytosis Due to Trifluoromazine Hydrochloride. *Frank J. Ayd, Jr.*... 940
Marsilid in Catatonic Schizophrenia. *Carl Breiner* 941
Severe Angioneurotic Edema During Chlorpromazine Therapy. *Frederick R. Hine*. 942
PRELIMINARY REPORTS:
The Use of Nucleic Acid in Aged Patients with Memory Impairment. *D. Green Cameron* 943
The Use of Ritalin* Intravenously as a Diagnostic Adjuvant in Psychiatry. *Herbert Freed* 944

Electroencephalographic Changes in Chronic Schizophrenics under Chemotherapy. <i>Max A. Bruck</i>	945
CORRESPONDENCE:	
Freud and Lay Psychoanalysis.....	946
COMMENT:	
The Cart Before the Horse.....	948
The "Reader of a Paper" and the "Listener": Some Heretic Thoughts.....	949
NEWS AND NOTES:	
Board of Scientific Counsellors for N.I.M.H., 951. Dr. Ragan Heads Dept. of Psychiatry, Univ. of Florida, 951. School for Mentally Retarded, West Seneca, N. Y., 951. Dr. John F. Stouffer Retires, 951. National Institute on Crime and Delinquency, 952. Morris Klapper New N.A.M.A. Assistant Program Director, 952. Austrian Medical Society of Psychotherapy, 952. Fourth International Congress of Psychotherapy, 952. Rorschach Seminars, Univ. of Chicago, 952. North Pacific Society of Neurology and Psychiatry, 952. Training Fellowship, New York City, 953. Virginia Beyer Memorial Lecture, 953. Medical Education Week, 953. Treatment of Mentally Ill in General	

Hospitals, 953. Dr. Reiss Appointed Director of Research at Willowbrook State School, Staten Island, 953. Eastern Group Psychotherapy Society, 953. American Board of Psychiatry and Neurology, Inc., 954. Ernest Jones, 954. Fifth International Congress of Internal Medicine, 954.

BOOK REVIEWS:

The Neurologic and Psychiatric Aspects of the Disorders of Aging. Edited by Joseph Earle Moore, H. Houston Merritt, and Rollo J. Massclink..... 955

Treatment of Heart Disease: A Clinical Physiologic Approach. Harry Goss and Abraham Jeser 955

Psychopharmacology. Edited by Nathan S. Kline 956

The Annual Survey of Psychoanalysis. Vol. III. Edited by John Frosch..... 956

*Culture, Psychiatry and Human Values: The Methods and Values of a Social Psychology. Marvin K. Opler..... 957

Halstead of Johns Hopkins, The Man and His Men. Samuel James Crowe..... 957

IN MEMORIAM:

Melvin Maynard Johnson, A.B., LL.D., 1871-1957 959

MAY, 1958

THE RELATION OF CHILDHOOD BEHAVIOR PROBLEMS TO ADULT PSYCHIATRIC STATUS: A 30-YEAR FOLLOW-UP STUDY OF 150 SUBJECTS. <i>Patricia O'Neal and Lee N. Robins</i>	961
COMMUNITY MENTAL HEALTH RESEARCH: FINDINGS AFTER THREE YEARS. <i>Margaret C.-L. Gildea, Herbert R. Domke, Ivan N. Mensch, A. D. Buchmueller, John C. Glidewell, and Mildred B. Kantor</i>	970
PATTERNS OF PATIENT MOVEMENT IN GENERAL HOSPITAL PSYCHIATRIC WARDS. <i>Lucy D. Osarin</i>	977
REHABILITATION OF THE MENTALLY ILL: IMPACT OF A PROJECT UPON HOSPITAL STRUCTURE. <i>Milton Greenblatt, David Landy, Robert W. Hyde, and J. Sanbourn Bockoven</i>	986
HOMEMAKER SERVICE IN PSYCHIATRIC REHABILITATION. <i>C. Knight Aldrich</i>	993
CONTROL PROBLEMS IN GROUP THERAPY WITH AGGRESSIVE ADOLESCENT BOYS IN A MENTAL HOSPITAL. <i>Belinda Straight and Sidney L. Werkman</i>	998
A NEUROPHYSIOLOGICAL TEST FOR PSYCHIATRIC DIAGNOSIS: RESULTS IN 750 PATIENTS. <i>Charles Shagass and Arthur L. Jones</i> ...	1002
THE EFFECT OF TRANQUILIZING DRUGS ON ENZYME SYSTEMS. <i>Jackson A. Smith, Michael J. Carver, and Eleanor W. Helper</i>	1011
INSULIN COMA IN DECLINE. <i>Harold Bourne</i> .	1015
CURRENT CLINICAL AND RESEARCH TRENDS IN SOVIET PSYCHIATRY. <i>Stanley Lesser</i>	1018
PSYCHIATRY AND HIGHER EDUCATION IN FINLAND. <i>Kauko Kaila</i>	1022

CLINICAL NOTES:	
Fractionation and Quantitative Analysis of Cerebrospinal Fluid Constituents with Reference to Neuropsychiatric Disorders. <i>Samuel Bogoch</i>	1028
A New Naso-Pharyngeal Airway for Use with Cerebral Electro-Convulsive Therapy. <i>Joseph Epstein</i>	1030
Clinical Impressions of the Response to Promazine Therapy. <i>Ludwig Fink and George Vlazianos</i>	1031
Electroshock Technique. <i>David R. Hawkins</i>	1032
Further Experiences with Electroshock Therapy Modified by Anectine®. <i>Charles Saltzman, William Konikov, and Ruth P. Relyea</i>	1033
Dartal: A Clinical Appraisal. <i>Frank P. Mathews</i>	1034
Iproniazid (Marsilid): Its Use in Office Treatment of Depression. <i>W. G. Scanlon and William M. White</i>	1036
A Further Note on the Mechanism of the Antidotal Action of Sodium Succinate in the Mescaline Psychosis. <i>Ian Stevenson and L. C. Mokrasch</i>	1037
CASE REPORTS:	
High Dosage Chlorpromazine Therapy After Previous Agranulocytosis. <i>M. G. Jacoby</i>	1040
Mental Depression Associated with Hyperadrenocorticism. <i>W. E. Olson and George A. Higgins</i>	1041
Hypnotherapy for Achalasia of the Esophagus (Cardiospasm). <i>Jerome M. Schneek</i> ..	1042

CORRESPONDENCE:

- Psychiatric Implications in Cancer Survival. 1044
Murder by Adolescents with Obscure Motivation 1045

COMMENT:

- Objectivity in Psychiatry 1046

NEWS AND NOTES:

- American Fund for Psychiatry, 1048. Death of Dr. William F. Lorenz, 1048. Institute for Psychotherapy, Univ. of Vienna, 1048. Dr. Philip R. Lehrman Dies, 1048. N.I.M.H. Research Grant, 1048. Intellectual Loss from Brain Injury, 1048. Dr. Lewis B. Hill, 1049. Protective Emblem for Civilian Doctors in Wartime, 1049. Dr. Bowman Teaches in Bangkok, 1049. The Gerontological Society, Inc., 1049. Society for the Scientific Study of Sex, 1049. Rehabilitation Centers, 1049. The Mentally Retarded Adult, 1050. National Institute of Mental Health Grants, 1050. Availability of Scientific Research in the U.S.S.R., 1050. International Research Newsletter in Mental Health, 1050.

BOOK REVIEWS:

- A New Psychotherapy in Schizophrenia. *Marguerite Sechehaye* 1051

- Mental Depressions and Their Treatment. *Samuel Henry Kraines* 1051
Police Drugs. *Jean Rolin* 1052
Introductory Psychosomatic Dentistry. *John H. Manhold* 1052
Principles of General Psychology. *Gregory A. Kimble* 1053
Troubles Mentaux au Cours des Tumeurs Intracrâniennes. *H. Hécœn and J. de Ajuriaguerra* 1053
Art, Myth and Symbolism. *Charles P. Montford* 1054
Women of Forty. *M. E. Landau* 1054
Biochemical Individuality. *Roger J. Williams* 1054
A Guide for Psychiatric Aides. *Charlotte R. Rodeman* 1055
New Gould Medical Dictionary (2nd ed.) Edited by *Norman L. Hoerr and Arthur Osol* 1055
Ageing in Transient Tissues. Edited by *G. E. W. Wolstenholme and Elaine C. P. Millar* 1055
Case Book in Abnormal Psychology. *Henry Weinberg and A. William Hise* 1056

JUNE, 1958

FOLLOW-UP RESULTS IN PSYCHIATRIC ILLNESS.

- Donald W. Hastings* 1057

STUDIES IN ULCERATIVE COLITIS. *George J.*

- Mohr, Irene M. Josselyn, Jeanne Spurlock, and S. H. Barron* 1067

A CONTROLLED STUDY OF THE SHORT-TERM

- DIFFERENTIAL TREATMENT OF SCHIZOPHRENIA. *Werner Simon, Robert D. Wirt, Anne L. Wirt, Alden V. Halloran, Robert G. Hinckley, J. Benjamin Lund, and G. Wendell Hopkins* 1077

ON SOME PRINCIPLES OF THERAPY. *Sydney G.*

- Margolin* 1087

PROGNOSIS IN ADOLESCENT DISORDERS. *James F.*

- Masteron, Jr.* 1097

PATIENT "PRIVILEGES" IN MENTAL HOSPITALS.

- A. H. Tuma and Lucy D. Osarin* 1104

CLINICAL NOTES:

- Iproniazid Phosphate in the Treatment of the Chronic Hospitalized Schizophrenic. *Arthur Hoshino and Eugene Cease* 1111

A Comparison of Rhythmic and Non-

- Rhythmic Music in Chronic Schizophrenia. *Arnon Gallas, C. F. Lascelles, and Nora Crone* 1111

Use of Chlorpromazine Combined with Pro-

- chlorperazine. *Joseph Barza* 1112

Orphenadrine in the Treatment of Depres-

- sion: A Preliminary Study. *James R. Robitscher and Sydney E. Pulver* 1113

Experiences with Marshall with Report of

- One Death. *Brian R. Smarr, Herman W. H. and Maurice D. Freeman* 1115

The Use of Oral Hypoglycemic Agents in the Treatment of Schizophrenia. *Carl*

- Gouldman, Harry Henderson, Dorothy Christian, and Jackson A. Smith* 1116

Management of Severe Chronic Psychotics

- with Sustained Release Chlorpromazine. *Henry Staras and Thomas Tourlentes*... 1117

Triflavin Treatment in Psychotics. *I. I.*

- Weiss, J. H. Rubinger, M. Sorin, and N. Rysen* 1118

CASE REPORTS:

- Treatment of a Case of Psychotic Depression Complicated by Aortic Homograph Replacement. *J. Weatherly and L. M. Villien* 1120

HISTORICAL NOTES:

- A Note on Wagner-Jauregg. *Zigmond Lebensohn* 1122

COMMENT:

- Correctional Psychiatry 1124

NEWS AND NOTES:

- Schizophrenia as a Public Health Problem, 1125. Smith, Kline & French Foundation Awards, 1125. The Public Health Nurse, 1125. Expanded Research Program in Neurophysiology, Stanford Medical School, 1126. National Council on Family Relations, 1126. Dr. Bloomberg Appointed Commissioner of Mental Health, Connecticut, 1126. Research Fellowships, Univ. of Pa. School of Medicine, 1126. Brooklyn Psychiatric Society, 1126. Army Social Work, 1126. N. J. Neuro-Psychiatric Institute, 1126. Residency Traineeships in Psychiatry, Pennsylvania, 1127. Congress of Psychiatrists and Neurologists of French Speaking Countries, 1127.

American Board of Psychiatry and Neurology, Inc., 1127. Report on Consultant Mental Health Services, New York, 1127. Eastern Psychiatric Research Association, 1127. American Neurological Association, 1127. Dr. Eugene S. Turrell Appointed Medical Director of Milwaukee Sanitarium, 1127. Correction, 1127.

BOOK REVIEWS:

- The Three Faces of Eve. *Corbett H. Thigpen and Hervey M. Cleckley*..... 1128
 Culture and Experience. *A. Irving Hallowsell* 1128
 Basic Readings on the MMPI in Psychology

- and Medicine. Edited by *George Schlager Welsh and W. Grant Dahlstrom*..... 1129
 Individual Traits and Morbidity in a Swedish Rural Population. *Erik Essen-Möller*. 1130
 Personnel Management: Principles and Practice. *C. H. Northcott*..... 1131
 The Practice of Psychiatry in General Hospitals. *A. E. Bennett, E. A. Hargrove, and Bernice Engle*..... 1131
 Battle for the Mind. *William Sargant*..... 1132

ANNUAL INDEX:

- Subject Index 1134
 Author Index 1144



Francis J. Braceland

PSYCHIATRY AND THE SCIENCE OF MAN¹

FRANCIS J. BRACELAND, M.D.

We are that bold and adventurous piece of nature, which he that studies may wisely learn, in a compendium, what others labour at in a divided piece and endless volume.

SIR THOMAS BROWNE

FOREWORD

I

Just as there is no longer a place by the fireside for grandfather to sit and smoke his pipe, so there is really no room for the president of this group to give a report on the state of affairs of the Association. This is no complaint—he can do it, of course, but it is done so much better now by the administrative officers and by the various chairmen that another report would be redundant.

I shall not try to express my thanks to you; I would make a bad job of it. You know how I feel upon receipt of this, the highest honor you have to confer. To the officers and the various staffs I shall express my thanks privately and clumsily, I am sure. To paraphrase Mr. Churchill, never has any one man been indebted to so many for so much. I return this office to you with humility and affection and the hope that I have guarded it well.

Along with the reportorial function, another door is now closed to the president of the Association. Everyone, who has followed his peregrinations in the News Letter, knows that he has had little time for research—yea, even little time for clinical observation—while he rushed from hearing to meeting, and from trains to planes. And yet, by hallowed custom, a discourse is required of him as he turns over his badge of office. There is only one path open to him then—the philosophic. He can examine the status of the discipline and see how it fares in relationship to its sister specialties and to art and science in general. This I shall do and shall examine our relationship to the science of man, for it is time now to consider the location of our art and science in space and perhaps to scan the horizon and attempt to determine the directions which our specialty is taking.

When the theoretical physicists, Doctors Lee and Yang, recently challenged the principle of parity, their work shattered completely one of the basic laws which had been built into all physical theories in the past thirty years. This had been a philosophically pleasing theory—this idea of mirror symmetry of submicroscopic particles—which they demolished and, worse and more of it, it had consistently borne fruit in the making of successful predictions about atomic and nuclear processes. This is worthy of our attention—the theory was erroneous; yet successful predictions were made from it. Now, suddenly, this attractive theory was destroyed and we are told that there is no one who can say when or how the pieces will be put together again. In the early stages of their work, the young scientists could hardly have suspected the widespread implications their findings would have, but before long it became apparent that an obstacle was removed and a way was now clear and, out of the intellectual ferment and ceaseless reexamination of principles the new discovery had initiated, there might eventuate something which thus far had eluded all scientists. This eventuality hopefully might be a unified field theory encompassing all of the laws of matter, energy and the universe.

This little drama of physical science had its counterpart in the last decade of the last century when Freud challenged the then current ideas regarding the etiology of emotional disorder. These ideas, too, had been philosophically comfortable and they had been held in various guises for many years. Freud's brilliant observations, unrecognized and unappreciated at first, are now seen to have signalled a turning point, not only in psychology, but also in science, and from them another eventuality might also stem—in this case a step toward a unitary or inte-

¹ Presidential Address delivered at the 113th annual convention of The American Psychiatric Association, May 13-18, 1957, Chicago, Ill.

grated approach to the science of man. Some aspects of the new theory, as propounded first, would have to be changed, but even from these would come some successful predictions about the emotional reaction of man.

While the potentialities of the physicists' ideas were recognized quickly, Freud's revolutionary ideas were missed entirely. They were even overlooked by Freud and his colleagues, for they did not realize that here were the precursors of an entirely new system of thought, one which would require an approach entirely different from that being applied to the formulations of general medicine. Unhappily, this new system was forced into the then extant and waiting molds of scientific thought, though it took procrustean techniques to do it. Had the newness and the significance of these ideas been recognized and had they been followed to their logical conclusion, instead of being pushed into convenient molds, much of the bitterness and opposition which their promulgation engendered would have been avoided. It is only now that the far reaching importance of these ideas and insights are being fully appreciated. Their influence penetrates into many disciplines; they are more by far than a treatment and research method; buried in them are precious creative currents and, in the words of Karl Stern,² as a result of what we have learned from them, "our image of the interior world of man can never be the same as it was prior to 1894."

The beginnings of a new era are usually not recognized by the pioneers who are working in it. Ordinarily they proceed, thinking and operating in the approved categories of the time, unaware of the revolutionary aspects of their work. It was ever thus. It is the historian who retrospectively sees indications of approaching revolution at a time when few are aware that their traditional world is in rapid change. Though it may seem paradoxical in the light of some present day teaching, viewed in the light of history this new psychology heralded the end of a purely mechanistic concept of man.

Once again, as we meet here today, there are omens and portents which indicate that we are on the threshold of other major

changes. The tell-tale symptoms and signs are those of restless inquiry, examination and reexamination. Many of the major medical disciplines are in a state of transition, as are the physical sciences. The Joint Commission on Mental Health is about its important comprehensive investigations. Psychoanalysis is examining itself as a discipline and seeking to evaluate its efforts and its results and its directions, and one might prognosticate that the findings will herald an even closer rapprochement with medicine.

Medical educators are in full scale reassessment of their curricula, due to the realization that, despite their high standards, something is still lacking in their finished product. The practice of medicine itself is changing and, as Atchley³ puts it, the doctor now, "instead of being satisfied to merely identify his patient's condition with a large group of similar diseases, tries to analyze all the various abnormal components in this one person and thus reach an appraisal, rather than apply a label."

Verily, then, these are times of change—these are the best of times; these are the worst of times—we have everything before us; we have nothing before us. There are sounds of trouble in the distance, but the click of Madame Defarge's needles now is supplanted by the sound of the Geiger counter symbolic of a nuclear age. In this transitional phase, as psychiatry reexamines itself, it seeks to find its place in the scheme of things. Until now it has been lusty, sprawling, verbose and growing apace. It is wise to examine itself while there is still an earth for the meek to inherit.

If the present state of psychiatry is envisaged as one of transition or transformation, there arise certain problems of gravity which the psychiatrist has to consider in full consciousness of his responsibility and hence, in seriousness and humility. The future development of his discipline depends upon the solution of these problems, as does the value of the services he will render to mankind. Though philosophers may discuss whether the events of history follow their own intrinsic, inexorable laws, or whether they be directed to some extent by man's doings, we

² The Third Revolution. Karl Stern, Harcourt Brace & Co., N. Y.

³ The Changing Physician. Dana W. Atchley, The Atlantic Monthly, Aug. 1956.

must act, as Ignatius Loyola says, as if everything depended upon us, even though we know that nothing depends upon us alone.

Modern psychiatry, by virtue of its intrinsic developments on the one hand, and by the demands made by society on the other, differs from what it was even a quarter century ago. It no longer focuses entirely upon mental disease, nor the individual as a "mental patient," but rather it envisages man in the totality of his being and in the totality of his relationships. Consequently, the place of psychiatry within the system of medicine, as well as within the complex of all disciplines concerned with man, his nature, his work and his destiny, also has changed. If one designates the totality of all disciplines concerned with the manifold aspects of human being and doing as *humanism*, then psychiatry has become a *humanistic* discipline. It has become an essential part of an over-all science of man—of general anthropology. The movement of psychiatry in this direction and the ensuing transformation of psychiatric thinking is not an isolated phenomenon. It is expressive of a new turn in the manner in which man looks at himself. It was Sherrington who said: "Man in his mood may count himself in his day a brief spectator of his own shaping as it still progresses."

Psychiatry by becoming more humanistic need not in any way become less scientific. Scientific inquiry and methodology must always form the solid foundation of our discipline, but upon this foundation must be erected the edifice of a psychiatry which will be an applied science of man. The humanistic tendencies of our discipline have already proved a stumbling block for some of our medical colleagues. Because of some misunderstanding, they equate the humanistic aspects of our approach with a meddlesome form of do-goodism; yet nothing can be further from the truth. Humanism and a scientific approach to the science of man are not mutually exclusive. By science we mean here not mathematical science in the narrow sense of the term, but the meaning which it had of old: "encompassing and well ordered knowledge." One might even say the ideal goal of the psychiatrist is to achieve wisdom. The best one can do, of course, is to aspire to this attainment and the first step toward

it is that of recognizing one's limitations, of being conscious, as was Socrates, that one knows nothing in comparison with what he should know. Psychiatry can be justly proud of its achievements in the relatively short time in which it has functioned as a discipline; yet at the same time it is required to be humble because of what it does not know and because of the enormous problems which still face it. Paradoxically, wisdom is a mixture of humility and legitimate pride.

If psychiatry is to take its proper place in the science of man, it must be aware of its limitations and realize that it is only a part of this science, an important but a small part insofar as the general knowledge of man is concerned. To forget this is to run the danger of scientific imperialism. By this term I mean to indicate the tendency, encountered regularly in the history of knowledge, to credit a special discipline with universal significance. The final result of such enthronement is always the catastrophic dethronement of the apparently supreme branch of knowledge. You have seen this little melodrama even within the framework of psychiatry itself. If you cast about you, you will see it on an even larger scale in the form of a cloud of anti-scientific attitude, "no bigger than a man's hand," but there nonetheless. It is an increasing unwillingness to see in science a world-saving panacea or to believe in the possibility of solving all human problems by means of scientific inquiry. If this cloud enlarges, it is because the scientists, or perhaps better the popularizers of science, have indulged in this imperialism and failed to recognize that human existence shows facets where science and her methodology prove insufficient. The same danger faces psychiatry, if its popularizers become too enthusiastic or its enthusiasts become too popular.

We would indeed lose many of our gains if we were injudicious enough to inflate the importance of our discipline in human affairs. There is at times a strong temptation to do this, as various questioners flatter us into making statements beyond our competence. Our specialty might have been put in a ludicrous light by some enthusiasts immediately after World War II. Do you remember the reductionism in the concepts and the arrogance with which they were to be applied?

The paradigm was simple—the proponents were flush with remembrance of recent accomplishment and recent victory. The reasoning went something like this: Fights and wars are caused by hostility in men. We understand and treat hostility. We shall do this on a large scale. Ergo, we will stop wars. Do you remember that chauvinism? Fortunately, wiser heads prevailed or it might have been dangerous. We spoke above of our need for humility and wisdom and now we see the need to add prudence to these virtues.

We must beware of attempting to derive universal principles or rules for a general science of man from our limited observations. It is necessary for us to keep in mind the fact that we deal with one group of human beings and with reactions in some way abnormal. It is wise to remember also that the study of the abnormal indeed posits the question of what is normal, but it does not necessarily answer it.

Psychiatry is a part of the science of man; it has a place in it and is a dependent upon it and a contributor to it. It is a part of the science of man because it deals with certain basic and historic problems of man and his society: with thought, emotion, behavior and human relatedness gone wrong. Psychiatry is dependent upon that science, inasmuch as appraisal of the abnormal is necessarily based upon knowledge of what is conceded to be normal, on knowledge of man's intrinsic nature and what makes him function and behave as he does. Psychiatry's contribution comes from the demonstration it makes of certain basic features of the human psyche and their universality.

II

Science builds upon knowledge previously accumulated, not only in its own field, but in encompassing and contiguous areas. All inquiry in a circumscribed area is advantaged by the use of general principles and the data of related sciences. Psychiatry is dependent upon many disciplines concerned with human biology and human behavior. Just as the phenomenon, man, and all that pertains to it is extremely complex, so also is abnormality at the human level. The more abnormality refers to the total human being, as it does in psychiatry, the more necessary it becomes for

psychiatry to consider all of the diverse aspects of human nature and human conduct and to examine the knowledge recorded by succeeding generations of thoughtful students of man. We learn today what we may have to unlearn tomorrow and we learn recurrently lessons which were taught before and then forgotten in the changing seasons of science. Today the accumulation of knowledge about man and his behavior is proceeding swiftly along many fronts and from the interpenetration and integration of that knowledge will emerge the new science of man of which we speak. It will be well for us to incorporate into that science the older wisdom and not to neglect it because it speaks of man's eternal preoccupations and so of his future purpose.

Speculative as this all may seem, it is of the greatest importance to us here and now. The organic substrate of the psyche is again a matter of major interest and, if we are not careful, all or part of that vast psychological insight, which Janet, Freud, Jung, Adler and Meyer and their followers gave us, will languish or be minimized. We have already hinted at the dangers of reductionism from the complex phenomena with which we deal to any simple formula. The history of psychiatry which reflects the cultural, as well as the medical, climate of society is testimony to this. Exclusively mentalistic and exclusively biological conceptions have reigned in turn and have contributed in turn to the one-sidedness of psychiatry's preoccupation at various recurring intervals. The pendulum has swung widely—too widely—from one extreme to the other and this has boded ill for our specialty.

Very broadly speaking and with more simplification than is at all justifiable, one may follow three great periods in the history of mental disorder. One is predominantly mentalistic, in the middle ages, when mental disturbances were seen as the outcome of inordinate living or as an index of demonic possession. Yet, mental diseases were certainly recognized as illnesses before that time. William of Paris (Died 1242) noted that physicians did not know enough of diseases of the mind. His voluminous treatise, *De Universo*, includes some peculiar ideas concerning the functions of the brain which stem partly from Aristotle (i.e., the notion of the

brain as a "cooling organ" and of the heart as the seat of mental operation may be found in several of his works), and partly from the latter's Arabian commentators, especially Avicenna. These notions were further developed by Thomas Aquinas in the 13th century, leading logically to the doctrine that certain mental disorders could, or even must, be caused by disturbances of cerebral function. Similar ideas could be traced back even to a follower of Pythagoras, Alcmaeon of Croton, in Southern Italy in the 6th century B. C. It is noteworthy also that in the medical school at Salerno the central role of the nervous system was taught in the 12th century and that they recognized the left-right relationships of the hemispheres and the body. Yet, with all of this, there was a swing to the mentalistic and medicine abjured its responsibility for patients with psychic deviations. There resulted a constant pyramiding of superstition and cruelties that marked much of society's dealing with the mentally ill up to the 19th century.

Although Pinel is justly famous for his humanitarian efforts with the mentally ill and for paving the way for a psychology with strong ethical connotations, he also did something else which was to have major repercussions throughout medicine. In his *Nosographie Philosophique*, published in 1798, he attempted to apply to problems of disease a new method of scientific analysis inspired by the Linnean system of scientific classification, and also by the philosophy of the enlightenment. However, Pinel came under the doubtful influence of such philosophers as Condillac and LeMettrie, the latter himself a physician and the man who coined the term, "man, the machine." This period, with a short interruption during the age of Romanticism, culminated in the formula: *mental diseases are brain diseases*. It was the period of a more or less fantastic brain mythology in which the current psychological conceptions were restated, via arbitrary and superficial analogies, in terms of hypothetical cerebral functions. The moral connotations of psychology went into complete eclipse and the way was open for an investigation of man's mental processes on purely mechanistic levels. Here, indeed, was a wide swing of the pendulum.

Charcot, who had such a decisive influence

on the formal development of neurology and neuropathology in the latter 19th century, was also instrumental in pointing the way to psychogenetic concepts in psychiatry. The struggle was bitter in that climate of the time, which considered scientific only the biological approach to man and man's diseases and in which the evolutionary theory was used to explain whole systems of philosophy, psychology and sociology. It was natural and expedient to effect a compromise, if possible, between biological and psychological notions. Freud accomplished this by making psyche and soma two closely related aspects of the living human organism. Instinct is thus rooted in bodily functions and apparatus and also represented in the mind by the image of the situation which would afford instinctual satisfaction, either directly or indirectly. In this way it was possible to view mental states and experiences as causal determinants without relinquishing the idea that everything in man is ultimately organic or somatic. Few authorities took kindly to this compromise, particularly when Freud also tried to show that the psyche has its reasons that reason knows not of, and when his use of the symbol made it possible to extend the range of psychogenesis to bodily symptoms. However, powerful adherents gradually flocked to the psychoanalytic banner and it transpired, in some way contrary to the original spirit of the Freudian doctrine, that exclusive emphasis was placed upon psychogenesis and the somatic aspects of mental disorder were neglected. The pendulum had swung widely again.

We noted earlier that this new psychology brought with it an entirely new view of man's nature. Symptoms were considered expressions of the total personality; inquiry was directed at the hidden purposiveness of neurotic phenomena and the meaningfulness of experience was construed to depend upon the individual, his life history, attitudes and value systems. This emphasis was revolutionary and might have had more ready acceptance had it been kept from the old mold of cause and effect relationships, which followed the laws of thermodynamics presumed to apply to a closed energy system. Like the principle of parity, such a system permitted many successful predictions but that it would need to be tempered became apparent as vari-

ous physical methods of treatment appeared and made possible definite therapeutic progress. Not that the value of psychotherapy was lessened in any way, but it became clear and definite, and we now may regard it as axiomatic that *no one approach to psychiatric disorder can claim a monopoly upon wisdom, understanding or therapeutic efficacy.*

III

It is evident by now that we espouse a comprehensive form of psychiatry and that integration is the watch word in our emphasis. Unfortunately, this term has taken on connotations which are not our consideration here. By integration we mean that all possible aspects of man's make-up and his needs be considered and united with each other in a homogeneous picture. Having discussed the predominantly mental, we should note briefly the activities in the somatic and the social aspects of man's life and what, for want of a better term, we will designate the philosophy of present day existence. This is the material with which, and the field in which the psychiatrist works. As we consider the various activities in the neurological sciences, we see some new formulations which hint at some old ideas.

We do not need to touch upon the new drugs in this discussion, for we can be sure they will receive thorough consideration at this meeting. You all know their attributes and their deficiencies. We can be properly thankful for the appearance of these potent agents, and at the same time hope that in the light of our past experiences we will not be tempted into an era of uncritical pharmaceutical enthusiasm. Perhaps the best antidote against this would be the required reading and rereading of Stewart Wolf's excellent work on Placebos. The description therein of the man who had asthma for 27 years and who responded to the new drug administered under carefully controlled conditions, only to have it later prove to be an inert substance, should furnish the theme for meditation for all those whose chemical titer gets out of bounds.

Likewise, we shall not discuss those substances which have produced psychotic-like experiences in the normal individual. There

is hope that out of this work will emerge some new insights.

In the meantime, the biological sciences have also been evolving approaches to a more integrated conception of man. Paralleling the studies of interpersonal relations by psychiatrists, neurophysiologists have studied the communications functions of the nervous system. Some psychiatric and neurophysiological positions purport to see certain analogues between man and the newer machines. This analogy, of course, has decided limitation and recalls to us the difficulties of Pinel's time with the concept, man, the machine. Men are not tools nor parts of a mechanism which functions the better the more appropriate the choice of its constituent elements.

In the area of man's biological needs, neurological experiments over the past decade have demonstrated a mechanism, lying in the internal core of the central nervous system, which is especially concerned in the regulation of biological adjustments. Some parts of this mechanism had previously been exposed by Claude Bernard and by Cannon, Bard, Rioch and others. But this work has been amplified to show osmosensitivity and pharmacosensitivity of the midline periventricular structures. In addition, there has been uncovered by Magoun a diffuse, afferent mechanism sensitive to the total amount of external stimulation—a mechanism involved in regulations of sleep and wakefulness and in the facilitation or inhibition of every sort of organismic activity. It is a mechanism which may well be responsible for the phenomenon observed by Spitz and others, that the amount of total stimulation during early infancy has an important influence on normal development.

There is evidence that the multiple determination of behavior is the outstanding "evolutionary" trend correlated with the development of the forebrain, and especially of the cerebral cortex. Experimental results suggest that the internal portions of the forebrain (the rhinencephalon, some of the basal nuclei and the septal region) have a bearing on motivation of behavior from the standpoint of reward and punishment. Foreseeing the outcomes of actions seems to be intimately bound to the relation between the frontal cortex, the limbic systems and the

hypothalamus. Recent experimental work by Pribram further elaborates fronto-cortical functions, in the sense that frontal lesions seem to affect the relative expectation placed on the desirability (rewarding or punishing aspect) of an action's outcome. Such expectation is determined by many factors apart from the biological "demands" of the organism, including the environmental "supply" of possible outcomes. These findings suggest to Pribram that, in an overall comprehension of man's being, that aspect which concerns man as a communicating organism from both psychiatric and neurophysiological points of view needs to be supplemented by the conception of man as an "economic" being, as one who not only communicates knowledge but is also capable of wisdom—capable, as he puts it, of "equilibrating expectations of the desirability of the outcomes of actions." Thus, at his social best, man is ethical and thus, also, from new experiments come suggestions of old ideas.

We have, therefore, from clinical psychiatry, as well as from experimental and neurophysiological sciences affirmations that the various aspects of human existence and nature interpenetrate each other, for the so-called lower layers are indispensable for the functioning of the higher, and the latter govern to an important degree the operation of the lower echelons. The data of the strictly vital vegetative and sensory functions are elaborated in higher mental operation and the composite influences, and are modified in turn by the social aspects of man and his relationships with his fellows. But none of this is independent from, or immune to what we may call man's higher aspirations, the meaning of his life, his understanding of himself and his place in the order of things. The net result of the evidence we have underscores the need to approach psychological problems from the humanistic point of view which affirms man's spiritual nature.

Meaningfulness of existence is not a by-product of modern science. Science produces no antidote for the trials and tribulations of man in a changing social and industrial order and a rapidly diminishing world. Man is easily upset and thrown off balance when the things on which he habitually relies fail him. The quest for security in modern life is diffi-

cult of attainment. For every new security established, another insecurity emerges. Not only does technological development bring its own dangers, but maintenance of security depends on ever closer cooperation and a denser network of social relationships. The more complicated a machinery becomes, the more vulnerable it becomes, and this is certainly true of the machinery of social life, and it is within the bounds of this social life that the psychiatrist works.

Today's society is seemingly dominated by what Riesman calls the "other-directed" man, who finds the motivations of his conduct and the ends he pursues not in himself, but in the dictation of the group. An age of mass production and mass communication gives birth to a mass society, where the individual is as much standardized as are syndicated columns, TV shows and the products of industry. Few dare to be different, and for good reason—for to be different brings them under the condemnation of the group on whose opinion they form their own opinion of themselves. The idolatry of conformity, of being exactly like everyone else in a group which tolerates only "marginal diversity"; the frenzy with which so many people addict themselves to all sorts of superficial activities or passivities—these and other enslavements of contemporary life originate, at least to some extent, from the need to replace beliefs and values and faith in which man once found security. But man's dignity cannot be served in ways that tend to depersonalize him and to deprive his existence of its real meaning. It cannot be served in the "over-adjustment" which is being advocated today, and the attempt to fit all men into a common denominator: the cooperative submitting member of the group.

Sooner or later it dawns on at least some of the people assimilated into modern mass society that their lives are empty of meaning; consequently that they themselves mean little; hence that quiet depression so often encountered in the hearts of men. Though man is conscious, if only in the hidden depths of his being, that he is a unique individual and irreplaceable, modern life makes each individual replaceable and denies his intrinsic and unquenchable need of being himself rather than a mere representative of a uni-

versal type. All one-sided development easily becomes pathological and may be pathogenic. That the more gregarious man becomes, the more he attains to the "good life," is a widely held misconception. Participation in culture is not the same as blindly adjusting to the group and submitting to its tyranny. Nor is the group, as such, necessarily representative of a "cause." On the contrary, we see today a marked aversion of average groups to be engaged in a cause; it is the fringe group, the contentious and litigious, which so often noisily espouses the causes, particularly if they are against something, or if they light up the unconscious hostilities or prejudices of the chronic querulant.

To serve man's dignity means to consider each man's individuality thoroughly and widely. The necessity of viewing man by means of categories of "historical thinking" is as obvious here as it ever was in the development of new approaches to psychiatry in recent years. These new approaches tend to make both the study and practice of psychiatry much more difficult. Psychiatric practice is not just the application of learned technique, no matter how exclusive or inspired it may claim to be. The practice presupposes a sort of human understanding by the psychiatrist. Human understanding is not merely the ability to explain human actions, attitudes, mental states, in terms of some theory which, as such, is necessarily general. All such theories remain somehow on the surface, for they are incapable of grasping precisely what it is that makes a person this one person, distinct from all others.

The spirit of the times—the *Zeitgeist*, if you will—is a useful concept if one refrains from endowing such a mythical entity with any kind of existence or reality. It is useful only because it expresses the fact that the most different phenomena of an age have something in common, reflect some trend in human life which exercises its influence on everyone's existence. The *Zeitgeist*, or the general cultural atmosphere in which a person grows up and lives, is as much a part of his environment as are the people who surround him or the conditions under which he works. Psychiatry is finding it rewarding to give consideration to these cultural—in the

widest sense, spiritual—conditions, as much as to the factors constituting the social situation of the individual. For the "world" of which the individual is himself a part, and which is at the same time set over and against him, is not the world describable by objective sociological analysis, but the world as he sees it, from his own individual standpoint. It is in many instances of primary importance for the psychiatrist to ascertain to what extent this standpoint is truly that of this one individual, and to what extent it is taken over, unexamined, from the environment and is perhaps inadequate to the needs of the person.

Reluctant though he may be, the psychiatrist in dealing with his patient cannot do much more than to seek some sort of compromise in all this. He must be wary of driving his patient towards an attitude of full realization, for this carries with it the danger of exposing him to the hostility of the group, and he must, on the other hand, help the patient towards a form of life in which he may again feel himself and his existence as meaningful. Ethics and esthetics, so important in the science of man, are therefore important to psychiatry also. Philosophers have often, in the course of history, voiced what the world in general did but darkly sense or did not know at all. But it cannot be predicted that the world will move according to the formulas of the philosophers. The power of well being, comfort, security and passivity is overwhelmingly great; it constitutes the modern siren song.

But what consequences and what directions may be drawn from all this for the future of psychiatry as a science? Though predictions are as uncertain as prescriptions are presumptuous, we must nevertheless attempt to map out some sort of program, or at least to delineate some sort of picture of what is going to happen in our field in the near future. Such an attempt is less risky the more conscious we are of the preliminary nature of all we may say and the more willing we are to modify our plans in the wake of new experience.

Of one point we may be certain: psychiatry will have to be more than ever a medical discipline. The recognition of the causal role of somatic factors, and of the therapeutic

effect of physio-chemical methods, underscores the need for a thorough knowledge of medicine as a prerequisite for doing responsible and successful psychiatric treatment. By the same token, the basic disciplines of psychiatry must be accepted by medicine. Anthropology, social and experimental psychology, the "normal" basic psychiatric science disciplines derive from faculties of philosophy and are not taught in medical schools. Even clinical psychology, an important aspect of psychiatric science, is rarely part of the young psychiatrist's training. As a result, the psychiatrist is handicapped at times when he attempts to think out new methods of approach to disease not already catalogued in his textbook, and the doctor who does not specialize in psychiatry is not adequately equipped to deal with the host of psychiatric problems he encounters in daily practice. The answer to this is as thorough teaching of the basic science disciplines of psychiatry as those of the purely medical sciences.

We may also be fairly certain of another point which, though already discernible, is more of a general vision than a clearly outlined program. We have come to realize that psychiatry, while undoubtedly and strictly a medical discipline, must at the same time be more than this. The psychiatrist in research and in practice is not justified in restricting his endeavors to one aspect of the human being. He has to take account of man as a whole and in the totality of his vital, social, cultural situation. Paradoxical though it may sound, the statement is nonetheless cogent, that to be truly a psychiatrist, one has to be more than a psychiatrist, more than a specialist. As we mentioned above, he must be a humanist. While scientific inquiry and methodology must always form the solid foundation of our discipline, upon this foundation may be erected the edifice of a psychiatry which will be the "applied science of man."

The ideal goal of the psychiatrist is to achieve wisdom, over and above the circumscribed knowledge that science, as it is understood today, affords. Psychiatry could do well with a philosophy of its own. Almost a century has passed since philosophy was formally expelled from psychiatry, but she returns inexorably to remind us that the old

problem of the relationship obtaining between mind and body still exists. Philosophy can claim no jurisdiction in matters pertaining to psychiatry and medicine proper. And it would be inappropriate to demand that the psychiatrist be a philosopher in the academic sense. But surely it is legitimate to demand from him an awareness of the fact that the problems in his purview transcend in their ultimate significance the field of purely empirical inquiry and that human existence extends beyond the strictly "natural" into the world of ideas, of truths, of values. The knowledge of man provided by dynamic psychiatry has made it clearer than ever that it is the inner life of the individual which is of paramount importance.

CONCLUSION

As I close this dissertation, I am aware that I have ranged far afield, with thoughts extending lightly in the clouds; yet all of me is planted solidly with my respected colleagues in the mental hospital, the scene of our labors. Earl Bond spoke feelingly of the necessity of giving the hospital psychiatrist a place in the scheme of things and he asked that all scientific day dreams be checked by the facts which the hospital psychiatrist has in his possession. I feel that my score in that test would not be high and yet it is necessary at times to soar from the hard facts of too many sick people, too little help, too little of everything furnished too late.

I know the futility of asking overworked and fatigued men to look up from their labors in order to see something grand in the overall scheme of things; yet look up we must and, when we do, we can better serve not only the progress of psychiatry, but also the progress of man to a fuller and better life.

If the science of man brings enlightenment to psychiatry, psychiatry can repay this debt amply by keeping in mind the great dignity of man and what human nature really is. The psychiatrist, even more than others, is entitled to make his own the words of the poet, Terence:

"Nil humani a me alienum puto."

(Nothing that concerns a man do I deem alien to me.)

DAVID EDOL

DAVID EDOL

RECEIVED

6

FRANCIS J. BRACELAND, M. D., EIGHTY-THIRD PRESIDENT, 1956-1957: A BIOGRAPHICAL SKETCH

HOWARD P. ROME, M. D.¹

In a characteristic fashion, Frank Braceland's preface to the 129th Annual Report of the Psychiatrist-in-Chief of the Institute of Living recalled a eulogy given 100 years previously by his distinguished predecessor, a founding member and a president of this Association. Dr. John S. Butler had said of a fellow worker:

His equanimity and calmness checked the unduly excited; his suavity and quiet dignity calmed the turbulent; his kindness, cheerfulness and wit, with his ready repartee, cheered and amused the desponding, while his rare conversational powers and his fund of anecdote and of general and useful knowledge, made him the welcome companion of all.

As drawn by Dr. Butler the vignette was strikingly, although unintentionally, autobiographical. One hundred years later its author, the pioneer American psychiatrist, whose humane and enlightened care of the mentally ill, Charles Dickens commended as "a great moral lesson," was himself recalled in a similarly inadvertently autobiographical manner by the 83rd president of the Association. Frank Braceland's selection of this century-old tribute exemplifies Fichte's observation: ". . . the sort of a philosophy a man has depends on the sort of man he is."

Then too, the brash observations of youthful peers have a quality of insight which is often as penetrating as it is mordant. The editors of *Clinic*, the yearbook of the 1930 class of the Jefferson Medical College, recalled, among others of the attributes of the "Black Prince," "his resourceful sense of humor" and "his ability to make friends." They recognized with Carlyle that "true humor springs not more from the head than from the heart . . . its essence is love."

Braceland had entered Jefferson from LaSalle College in Philadelphia in 1926. Fifteen years later his alma mater was to give him a doctor of science degree, the first of 4 academic recognitions. The citation with which Canisius College in 1956 conferred

upon him the degree of doctor of humane letters echoed the tribute of his classmates, ". . . He is warm, generous, kindly, understanding with a delightful sense of humor and combines all the qualities which we would expect to find in a person who loves his fellow-man. . . ."

The best postulancy for a psychiatrist is the personal experience of sharing with others the vicissitudes of life. Frank Braceland's life is a mosaic of variegated experiences. His father, John J., had died when Frank was 4 years old leaving him and 3 younger children to be raised by their mother, Margaret L'Estrange Braceland, a persevering woman devoted to her family. Happily she lived to see the full maturation of her long years of effort. Frank's collegiate education was the richer because of its late start. He came to academe by a most unlikely route. He was a semiprofessional baseball player, a swimming instructor and an athletic supervisor in a youth center of Philadelphia's "Brewerytown." In his typically laconic fashion he says of this: "I learned the hard way to be multidisciplined." He was too, for there was also a short-lived, sudoriferous career in boxing which has since furnished an inexhaustible store of anecdotes in the wry genre of the neighborhood gymnasium.

His choice of psychiatry at the termination of a chief residency at the Jefferson Medical College Hospital must have been determined in part at least by those alchemical years. His facetious remarks about being multifaceted only thinly veil the versatility his close friends have long appreciated. Despite most tempting offers as a testament to his recognized potentialities in surgery, pediatrics, obstetrics and internal medicine, he was persuaded to seek training in psychiatry by the experience of being a physician-companion to a patient recovering from a profound depression.

For a third generation Philadelphian, Kirkbride's was a natural place to turn to.

¹ Section of Psychiatry, Mayo Clinic, Rochester, Minn.

Under the tutelage of Bond, Strecker, Smith, Appel and Palmer, Braceland matured professionally in the intimate preceptor-pupil atmosphere of the Pennsylvania Hospital. From 1932 to 1935, he was an assistant physician at 44th Street—the Department of Mental and Nervous Diseases, Doctor Kirkbride's hospital. In 1935, he went to Europe as a Rockefeller fellow in psychiatry.

At age 35, in the turbulent 1930's, the opportunity to travel and study abroad was a rare one; as Falstaff advised "... to be relished with the saltiness of time." Dr. Earl Bond had suggested Zurich and Burghölzli. Braceland was an assistant physician there until early 1936: lectures, ward services, the Hochschule and excursions. European study always has been partial to peripateticism and for the pavement-reared Philadelphian this characteristic led to a *wanderjahr* which ran a full continental gamut. How does one assay the value of this kind of experience? The constantly shifting partial pressures of influences, some clearly defined, others vague, still others wholly subliminal, mold the slow change which shapes a life. A walking trip in the Tyrol, a series of discussions with Thomas Mann, Jung's and Adler's lectures, a visit to the colony at Gheel, these and many other catalysts accelerated the fermenting decision to return to Philadelphia.

Braceland, while working as a clinical clerk for Kinnier Wilson, received a cabled invitation from Dr. Bond to return as clinical director of the department of nervous and mental diseases at Pennsylvania Hospital. This invitation crystallized a future. Thereafter Braceland entered into the unique heirarchy of the associate staff of the Institute of the Pennsylvania Hospital. In this setting he served as an apprentice and a journeyman. His private practice-teaching arrangement gave him faculty status as an assistant professor of psychiatry in the Graduate School of Medicine of the University of Pennsylvania and, from 1939 to 1941, as an associate professor at the Women's Medical College.

In late 1941 his teaching and administrative accomplishments led to his becoming dean of the medical school and professor of psychiatry at Loyola University, in Chicago. The advent of World War II precipitated

him into another sphere of administrative medical activities to which he was committed, in one or another capacity, until the termination of his active duty with the medical department of the Navy in 1946.

For his wartime service, the decoration of the Legion of Merit was presented to Braceland by the Secretary of the Navy, acting for the President of the United States. The citation that accompanied the decoration acknowledged Braceland's

Outstanding services . . . as Special Assistant to the Surgeon General . . . as Chief of the Division of Neuropsychiatry . . . for the procurement and training of medical officers and enlisted personnel. . . . His medical knowledge and ability contributed immeasurably to the welfare of the Navy Medical Corps during these critical years.

Since those years Frank Braceland's contributions to various departments of the federal government have been almost too numerous to list. As a member of the Special Medical Advisory Board to the Veterans Administration, he represented both psychiatry and neurology. He performs a similar service as a member of the Armed Services Medical Advisory Board. Since 1953, he has been a member of the Health Resources Advisory Committee of the Office of Defense Mobilization as well as of the National Advising Committee on Selection of Physicians, Dentists and Allied Specialties. Former President Hoover appointed him, in 1953, to membership on the Commission on the Reorganization of the Executive Branch of the Government. He is a consultant to the surgeons general of the Army and of the Navy of the United States and, since 1950, he has been a member of the Advisory Committee to the Department of Defense (Rusk Committee).

The multifacets that comprise the panoramic scope of Braceland's interests and activities seem to increase in number with the years. At the termination of 5 years of active duty in the United States Navy he was asked to establish a section of psychiatry at the Mayo Clinic. During the next 5 years he not only succeeded in doing this but also, as professor of psychiatry in the Graduate School, University of Minnesota (Mayo Foundation), he created a program for fellowship training in psychiatry.

The state of Minnesota expressed its gratitude in the certificate of appreciation its Governor Luther Youngdahl awarded for the herculean task Braceland performed as organizer and chairman of the Governor's Mental Health Advisory Committee. Through his patient and persistent efforts, an archaic program for disenfranchised patients of state mental hospitals was replaced by one which merited the national attention it received.

Frank Braceland has the singular talent of being able to recruit enthusiasm and interest. The facility with which he can invigorate others is matched only by the ease with which he orchestrates their efforts. Walter Lippmann has said, ". . . the final test of a leader is that he leaves behind him in other men the conviction and the will to carry on." The trail of continuing success that Braceland has left meets this test.

The admiration and respect which are commanded by the efficiency and fairness of the examinations of the American Board of Psychiatry and Neurology rest heavily upon Braceland's contributions. As its secretary-treasurer during the 6 years of its most lush growth, and as its president in 1952, he earned the appreciation of many anxious candidates by his kindly efficiency and scrupulous fairness. The advice he gave to candidates (and personally takes) recalls in *double entente* Longfellow's palliative:

Let nothing disturb thee,
Nothing affright thee;
All things are passing.

This is the attitude for which he personally strives. His writings reflect it. It was expressed most lucidly in the delightful reminiscence of 7 years of experience as an officer of the board. The title of the tribulation signified it: "Secretary of the Board: Apologia Pro Vita Sua." In his 1955 chairman's address to the Section on Nervous and Mental Diseases of the American Medical Association, he was careful to explain that his were lesser, purely collateral opinions, subtitled, "Obiter Dicta." The only fitting response to an *apologia* and an *obiter dictum* is the one made by an horatian friend: *multum demissus homo*; freely translated—a real modest guy!

His move to the Institute of Living at

Hartford, in 1951, recreated the atmosphere of John Butler's day; in the words Dickens used to describe Butler's supervision, Braceland's work has been "admirably conducted on enlightened principles of conciliation and kindness." In Connecticut, as in Minnesota, Washington, Illinois and Pennsylvania, he has been active in teaching and all public affairs relating to mental health: Chairman of the State Society Committee on Mental Health of the Connecticut State Medical Society, member of the Medical Advisory Committee of the Veterans Administration Hospital at Newington, member of the Board of Advisors to St. Joseph's College, consultant to Hartford Hospital and St. Francis Hospital, clinical professor of psychiatry at Yale University, living up to the Sophoclean admonition:

A man of worth

In his own household will appear upright
In the state also.

His worth in his own house is attested by his labors for this Association; his membership on the executive and nominating committees, on the coordinating committee on professional standards, on the Isaac Roy award and the Salmon committees—and now the presidency.

Three facets perhaps are more revealing than any of the foregoing: his devotion to his religious faith, to his family and friends and to his books. The award to him of the signal honor of knighthood in the Order of St. Gregory speaks eloquently of his faith and of the recognition of his aspiration by his church. Because he is devout, he is free from that "horrible air of rectitude" which scandalizes as it reminds one of Dylan Thomas' male-nurse so smugly conscious of the radiance of his own nimbus.

To his wife, Hope, and his young children, Faith and Michael, he is affectionately known as a do-it-yourself householder with 10 thumbs proving, as a good teacher should by *argumentum ad demonstrandum*, the innate perversity of inanimate objects. The members of his household see him as an incarnated Johnny Appleseed, whose humus-bedded brood of geraniums promises to dispossess them of their lovely summer home on the bay at Watch Hill. He is a beachcomber by avocation, devoted to fascinating the en-

tire family with his discoveries in the tracks of the ocean's feet along the sands. All the children who know him see his real forte as a prestidigitator able to snatch money out of thin air. With his friends he shares the secret quest for the accolade of the Breton peasant: a private symbolism signifying the uninterrupted opportunity to live and work simply on a commonplace level.

Frank Braceland has a bibliomaniac passion. On his numerous trips about the country his luggage largely is a small bookmobile. As the afflicted indulgently describe it, there is no satiety of the passion for books. With a Jason-like strategy, Braceland fortifies himself against the tasks he is called to perform with periodic browsing in favorite

bookstalls in out-of-the-way shops. His major hunger temporarily slaked, he can better sink his teeth into less palatable fare.

His book-piled study in his home, as well as his office in the Institute for Living, completes any picture of him. There, looking down on his desk from all four walls are his books and portraits of his friends.

The quotation from Sherrington with which he closed his presidential message in the December, 1956, JOURNAL expresses his personal credo in the elegant manner he so deeply admires, ". . . we have an inalienable prerogative of responsibility which we cannot devolve, no not as once was thought, even upon the stars. We can share it only with each other."

EFFECT ON BEHAVIOR IN HUMANS WITH THE ADMINISTRATION OF TARAXEIN¹

ROBERT G. HEATH, M.D.,² STEN MARTENS, M.D.,³ BYRON E. LEACH, Ph.D.,
MATTHEW COHEN, AND CHARLES ANGEL, Ph.D.⁴

In this report of work in progress, we describe the effect of the administration of a protein substance, which we have named taraxein,⁵ extracted from the serum of schizophrenic patients. Taraxein has been given on 17 occasions to nonpsychotic volunteers and on 1 occasion to a schizophrenic in remission. In all, 20 human subjects have been used in this study. All experiments were designed as double-blind control studies. A variety of nonspecific substances were employed as controls including the protein fraction extracted from serum of normals by the same procedure as that used to obtain taraxein from schizophrenic serum (5 occasions); another protein fraction, ceruloplasmin, obtained from normal serum (3 occasions); known inactive solutions of taraxein (2 occasions); normal saline (2 occasions); and a weak solution of sodium amytal (1 occasion). Nonspecific control injections were given on 13 occasions. Four of the subjects received nonspecific substances exclusively, 2 of the 4 receiving nonspecific substances on two occasions. Four subjects received active taraxein on one occasion and an inert substance on a second occasion; 1 individual received 2 inert sub-

stances plus 1 active substance; another subject, active taraxein on two occasions and an inert substance as a third injection; 2 subjects, active substance on two occasions. When more than 1 substance was given to 1 subject, the subsequent injections were always given on the same day (Table 1).

In our previous preliminary report on the clinical aspects of this work(1), we described the effect of the administration of taraxein to 2 human volunteers, 1 of whom also received 2 inert fractions as a control; and our first observations of the effect of taraxein with its administration on 30 occasions to 11 monkeys with chronically implanted cortical and subcortical electrodes. To date we have administered the taraxein on 53 occasions to 20 monkeys with the chronically implanted electrodes. Many dif-

TABLE 1
NUMBER AND NATURE OF INJECTIONS GIVEN TO THE
20 VOLUNTEER SUBJECTS

Experimental group no.	Subject no.	Active taraxein	Inactivated taraxein	Normal B fraction	Ceruloplasmin	Normal saline	Sodium amytal
I	1	1	—	—	—	—	—
	2	1	—	—	—	—	—
	3	1	—	—	—	—	—
II	4	1	—	—	—	—	—
	5	—	—	—	—	1	—
	6	1	—	1	—	—	—
	7	1	—	—	—	—	—
III	8	1	—	—	—	—	—
	9	1	—	—	—	—	—
	10	1	—	—	—	—	—
IV	11	1	—	1	—	—	—
	12	1	—	1	—	—	—
	13	—	—	—	1	—	—
	14	1	—	—	—	—	—
	15	—	—	1	1	—	—
	16	1	—	—	1	—	—
	17	2	—	1	—	—	—
V	18	—	—	—	—	1	1
	19	2	—	—	—	—	—
	20	1	—	—	—	—	—
	—	—	—	—	—	—	—
Totals.	20	18	2	5	3	2	1

¹ Presented at Divisional Meeting of The American Psychiatric Association, Montreal, Canada, November 9, 1956. Illustrated with 16 mm. sound motion picture films. Supported by grant-in-aid from The Commonwealth Fund.

² Authors are from the department of psychiatry and neurology, Tulane University School of Medicine, 1430 Tulane Ave., New Orleans 12, La.

³ Special Foreign Fellow, The Commonwealth Fund.

⁴ Authors wish to express appreciation to Warden Maurice H. Sigler, Louisiana State Penitentiary, Angola, Pa., for making arrangements to conduct the experiments with human volunteers; to all those inmates of the penitentiary who volunteered for the experiments; to N. F. Otilio and William H. Miller for technical assistance; and to Irene Dempsey for help in correlating data and for secretarial assistance.

⁵ Taraxein from the Greek *taraxis* meaning confusion, or disorder of the mind.

ferent fractions have been tested in monkeys to control the study. Although we now possess considerably more information than at the time of our preliminary report, there is much information which we would like to possess but have not yet been able to gather. In this progress report we present the additional data on our clinical studies, being fully aware that much remains to be learned, but hoping that others will become interested in broadening the studies.

Factors leading up to the isolation of this blood fraction were briefly reviewed in the presentation at the APA meeting in Chicago, 1956(1). For several years we had obtained subcortical and cortical recordings from a group of schizophrenic patients(2, 3) which revealed a characteristic spike and slow wave pattern in the septal region and rostral hippocampus (Fig. 1B). Accumulated evidence indicated that the introduction of physiological variables to this region produced profound changes in blood chemistry. This led to the exploration of the comparative effects of schizophrenic and normal serum on the speed of adrenaline oxidation. Our findings suggested that adrenaline was more rapidly oxidized by the serum of schizo-

phrenics who were free of systemic disease than in normal control subjects(4). Similarly, we(5) found in confirmation of Altschule's work(6) that levels of reduced glutathione were lower in a statistically significant number of schizophrenics without systemic disease than in normal control subjects. Both indicators, *i.e.* the speed of adrenaline oxidation and the low glutathione levels, were, however, nonspecific since non-psychotic persons with various systemic diseases showed similar alterations. It was known from work of others(7, 8) that copper levels were increased in chronic disease processes and in schizophrenia, and that in diseases other than schizophrenia, the elevated copper levels were due to increased levels of the copper globulin oxidase, ceruloplasmin. In investigating the adrenaline oxidation phenomenon, we noted that the addition of copper speeded the process considerably. In one study we isolated ceruloplasmin from serum and found that this was the substance in serum responsible for the increased oxidation. Details of this study including the isolation of one inhibitor of the process (albumin) are given in a separate article(9). Recent evidence suggests the

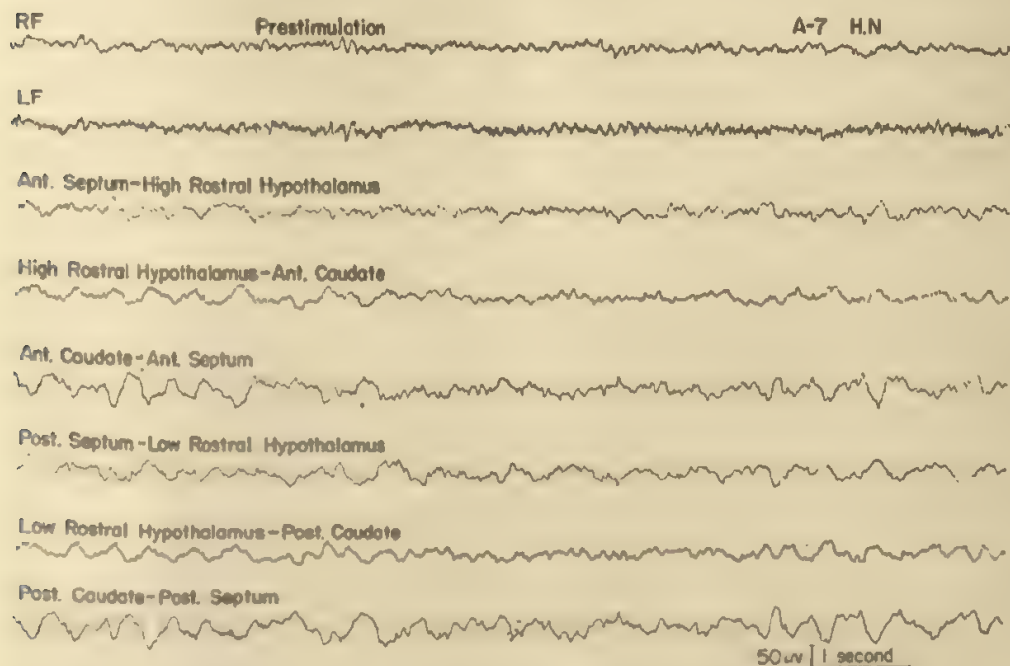


FIG. 1A — Scalp and subcortical recordings in a nonpsychotic human subject (intractable pain).

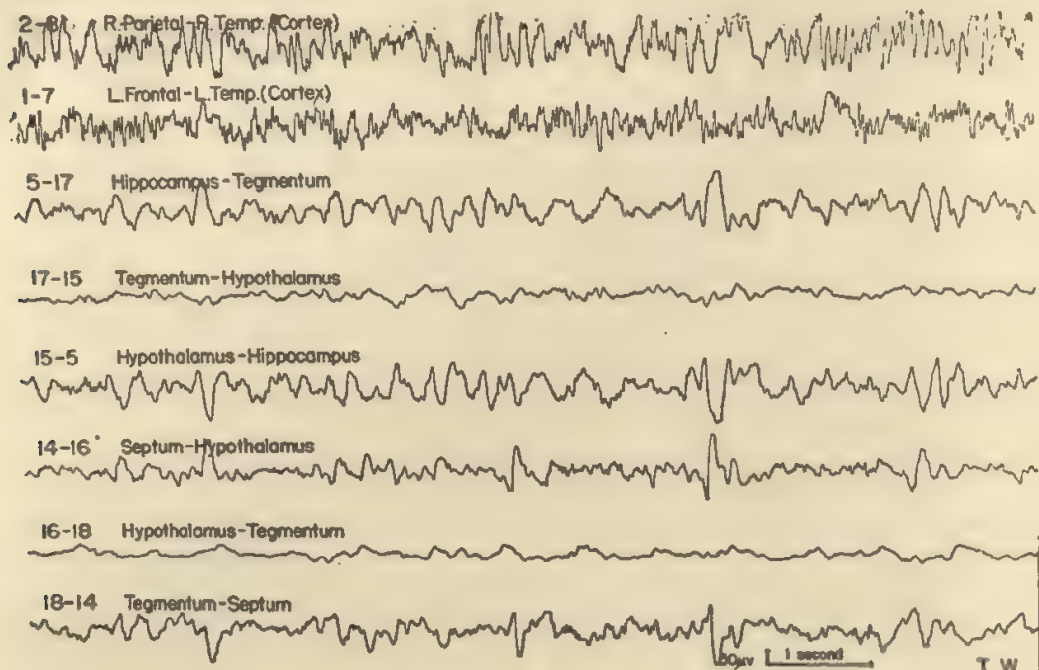


FIG. 1B.—Cortical and subcortical recordings in a schizophrenic patient.

presence of additional inhibitors. Inasmuch as patients with schizophrenia showed the increased speed of oxidation of adrenaline and lowered levels of reduced glutathione in the absence of systemic diseases, we postulated that perhaps a copper protein accounting for these differences might be qualitatively different if this chemical phenomenon, namely increased levels of oxidizing enzymes, was an important factor in psychotic behavior. To test this hypothesis we isolated ceruloplasmin from the serum of normals and schizophrenics and administered it to monkeys with chronically implanted electrodes. With the intravenous administration of ceruloplasmin from schizophrenic patients, the monkeys occasionally showed mild behavioral changes characterized by reduction in level of awareness resembling incipient catatonic symptoms. This did not occur with the administration of the substance extracted from normals. It was noted during the extraction procedure, however, that at one point in the process—namely when the euglobulins were precipitated out by lowering the pH to 6.2—a blue color was present in the precipitate from schizophrenic serum but not in the precipitate from normal serum.

Since we had these mild behavioral changes with administration of schizophrenic ceruloplasmin, we postulated that perhaps this apparently different precipitate might be significant. Therefore, instead of discarding it, as is routinely done in the extraction of ceruloplasmin, we set up a procedure for processing this substance. When the end-product of this procedure was administered to the monkeys, most profound behavioral changes resulted; the behavior resembling very closely that seen in schizophrenic patients. The monkeys appeared dazed and out of contact. They were catatonic and the extremities could be readily molded into various positions. In association with this, there were clear-cut alterations in the electrical recordings (Fig. 2), particularly from the septal region. Since we had accumulated considerable data on recordings from human schizophrenics which showed essentially the same characteristics, we reasoned that if our recordings in schizophrenics were significant, then administration of this substance should induce schizophrenic-like behavior in the humans (we could not reasonably call the monkeys' behavior schizophrenic since this diagnosis is

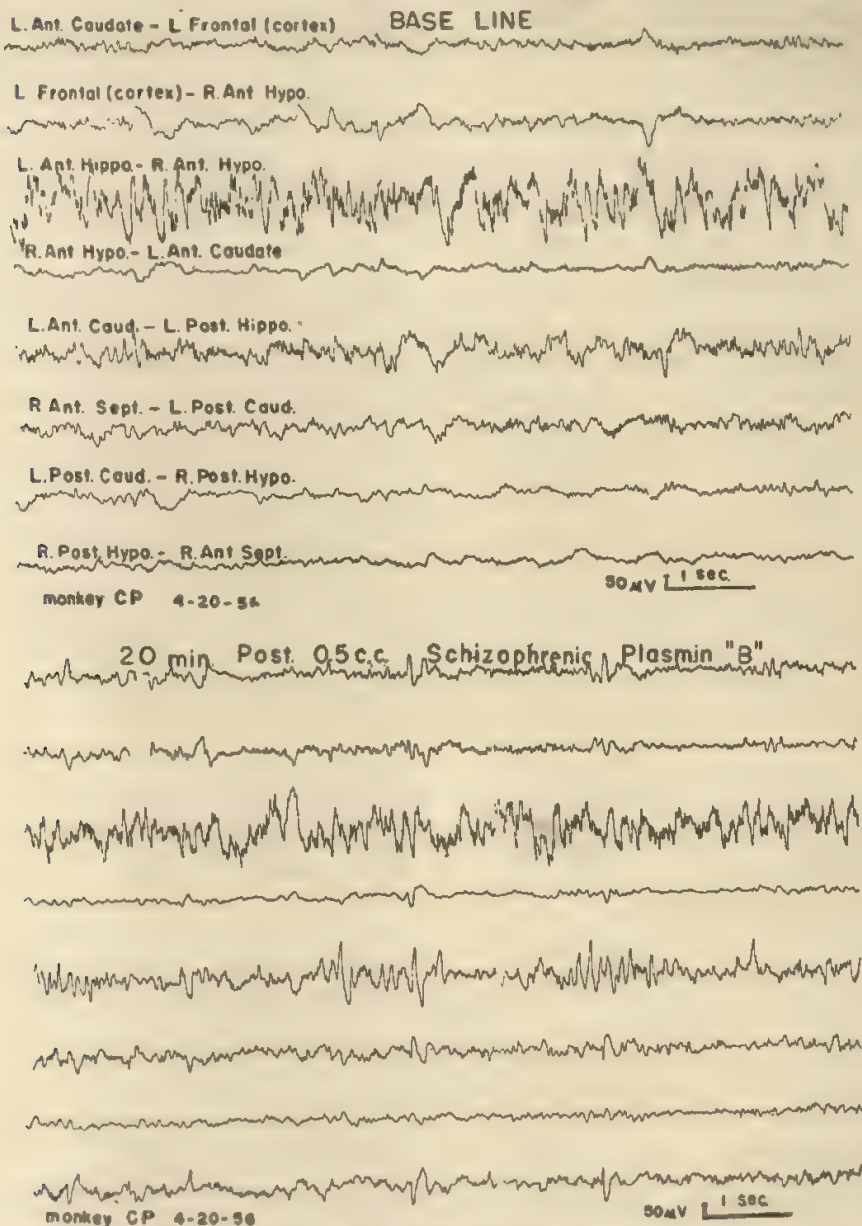


FIG. 2.—Subcortical and cortical recordings in monkey before and after administration of taraxein.

dependent upon the reporting of the patient). In this regard, our previous data on electrical recordings from humans were of extreme importance since we would otherwise have had no logical reasons for assuming that the behavioral reactions we observed in monkeys were anything more than simple toxic effects which many compounds are capable of producing. Other compounds which altered behavior in monkeys have never produced this

characteristic type of recording. Thus, by means of the electrical recording, we are apparently able to make meaningful cross-interpretations of behavior from animals to man.

MATERIAL AND METHODS

Schizophrenic patients, from whom blood was drawn for the experiments described, were selected from 4 local psychiatric hospi-

tals. Two were large hospitals for chronic care and 2 were acute treatment centers. All donors were physically well but showed clear-cut schizophrenic symptoms. They were not receiving physical treatment or drug therapy at the time, the drugs having been discontinued at least 3 days before blood was drawn. Diets in the 4 hospitals varied considerably. The patient group varied considerably in age and duration of hospitalization.

In all experiments thus far, the taraxein has been extracted from serum pooled from several patients. This has been necessary since the amount of taraxein needed to create a reaction in the host requires a minimum of 400 ml. of serum, or approximately 900 ml. of blood. For some experiments the pooled serum from the various classical subcategories (catatonic, hebephrenic, paranoid and undifferentiated) were pooled and processed separately. When serum was pooled according to diagnostic subcategories of schizophrenia, the donors were reexamined to check diagnosis. In most instances, 250 ml. of blood were drawn from each patient, using the standard Cutter Laboratory blood drawing sets. The serum was immediately separated from the blood cells, cooled and then transported to the medical school laboratories for processing. The fractionation process usually required 5 days.

In this experiment, the method employed to extract taraxein is a modification of the Holmberg and Laurel technique for isolating ceruloplasmin(10). The procedure which follows is for the processing of 400 ml. of schizophrenic serum (for control studies, similar quantities of serum from normal subjects are used).

1. Approximately 1,000 ml. blood obtained from schizophrenic patients is allowed to clot (2 to 3 hours) and is then centrifuged at 2,500 RPM for 20 minutes at 10° C. Usually 250 ml. from each of 4 patients is pooled.

2. Serum is separated from the clot by suction and is then cooled to 4° C. and divided into four 100 ml. portions.

3. To 1 volume of serum, 1.2 volumes of saturated ammonium sulfate (4° C.) is added while stirring. This mixture is then centrifuged for 3 hours at 4° C. at 2,700 RPM.

4. The supernatant is decanted and discarded. If the residue is not packed well, only as much supernatant is poured off as is possible without losing appreciable quantities of the residue.

5. The residue from each of the 100 ml. portions is then dissolved in 100 ml. of cold tap water (10° C.) and these solutions are then pooled and transferred to 1½" dialysis tubing for dialysis for 40 hours against cold tap water (10° to 15° C.). Our tap water varies in pH between 9.8 and 10.2.

6. The dialyzed material, which usually has a volume equal to about twice the original serum volume, is removed from dialysis and is allowed to stand at room temperature until it warms to 16° C. The pH at this stage is usually between 9.3 and 10.2.

7. The pH is adjusted to 6.6 with 0.4% acetic acid. The acetic acid is added dropwise from a burette with constant stirring. The pH adjustment at this stage normally requires 8 to 12 ml. of 0.4% acetic acid per 100 ml. of serum originally used (32 to 48 ml. for the 400 ml. batch).

8. The suspension with pH adjusted to 6.6 is centrifuged at 2,700 RPM for 20 minutes at 18° C.

9. The residue is solidly packed and glossy and is usually green to greenish-yellow. (The supernatant is poured off and retained to be further processed for ceruloplasmin.)

10. The 6.6 precipitate is suspended in a small volume of cold (10° C.) tap water by thorough mixing with a glass rod. Then sufficient cold tap water (10° C.) is added to make the volume equal to one-half the original serum volume, i.e. 200 ml.

11. This suspension is then transferred to 1½" dialysis tubing and dialyzed 10 to 11 hours against cold tap water (10° to 15° C.). This dialysis causes very little change in volume.

12. After removal from dialysis the material is allowed to stand at room temperature until it reaches 16° C. At this point the pH is usually between 8.0 and 10.0. Distilled water equal to the volume of the dialysate is then added.

13. The pH is then adjusted to 6.8 by the dropwise addition of 0.4% acetic acid while stirring continuously with a glass rod. The pH adjustment at this point usually requires between 0.5 ml. and 1.0 ml. of the 0.4% acetic acid for each original 100 ml. of serum, or 2 ml. to 4 ml. for the 400 ml. batch.

14. The volume is measured at this point and is approximately the original serum volume, i.e. 400 ml. The suspension is then cooled to between 3° C. and 1° C. in an ice bath.

15. An equal volume of chloroform-alcohol mixture (one part chloroform to 9 parts of 90% ethanol) which has been pre-cooled to between -12° to -25° C. is then added to the chilled suspension with continuous stirring. The temperature of the mixture at this point goes up immediately to between 5° and 11° C.

16. The mixture is then allowed to stand at room temperature for 3 hours.

17. This is centrifuged at 2,700 RPM for 30 minutes at 18° C.

18. The supernatant fluid is discarded and if a layer of chloroform collects below the solid residue, it is also discarded.

19. The residue is then mixed with 0.86% sodium chloride solution using 25 ml. for each 100 ml.

of serum originally used or 100 ml. for the batch. This mixture is dialyzed for 18 hours against running tap water.

20. The dialysate is then dialyzed for 15 hours at 4° C. against 1,200 ml. of 0.86% sodium chloride solution (300 ml. for each 100 ml. of original serum) the pH of which is 9.0.

21. This material is then centrifuged for 15 minutes at 4° C. and 3,000 RPM.

22. The volume of supernatant is then measured and 1.85 volumes of cold saturated (4° C.) ammonium sulfate is added and mixed.

23. The material is then centrifuged for 1 hour at 4° C. and 2,500 RPM.

24. The supernatant fluid is discarded and the residue is drained as completely as possible.

25. The inside walls of the centrifuge bottles are wiped with tissue to remove excess ammonium sulfate solution.

26. The residue is suspended in saline (0.86%) using 1 ml. for each 400 ml. of serum originally used. This suspension is transferred to a dialysis tube ($\frac{3}{4}$ ") and the centrifuge bottle is then rinsed twice using an additional $\frac{1}{2}$ ml. of saline each time, and this also is added to the dialysis tube.

27. The material is then dialyzed 40 hours against cold running tap water.

28. After removal dialysis the material is centrifuged 15 minutes at 2,500 RPM at 18° C.

29. The supernatant solution which usually has a volume of 2 to 3 ml. for each 400 ml. of serum may be retained at 4° C. for several hours (4 or 5) and still have activity or it may be quick-frozen in a thin walled container using liquid nitrogen. In the event that it is necessary to quick-freeze with dry ice and alcohol, the material should be in a sealed container so that it is not exposed to carbon dioxide.

This method has been slowly improved since we were first able to extract taraxein from the serum of schizophrenic patients. We expect to be able to improve the method further as we gain further understanding of the characteristics of taraxein. Through modifying the procedure over the course of the last year, we have become aware of a number of factors that will inactivate the substance. Currently, other techniques of extraction are being investigated. A detailed report of these findings will be forthcoming in another publication as we learn more of the identification of this fraction.

At present, even when all known factors considered in the outline of method are closely controlled, we do not always obtain consistent activity in the taraxein fraction. We do not have a method for accurately quantitating the amount of taraxein in our preparations. Our only method for determining the presence or absence of activity is

with animal assay (1). It has been our practice to administer intravenously to the monkeys the amount of substance we are able to obtain from 400 ml. of schizophrenic serum. If marked behavioral and EEG changes occur in the Rhesus monkeys, we consider the preparation to have maximal activity. If the taraxein from this amount of schizophrenic serum produces no observable behavioral or EEG changes in the animals, we consider the preparation inactive even though the test actually indicates that we have not reached threshold dose for this animal. The taraxein given to the human subjects in this experiment was rapidly administered intravenously. The actual amount of fluid administered was 1 to 3 ml. This was the quantity derived from 400 ml. of serum.

The experiments with human subjects are divided into 5 groups. Each of the 5 was designed to answer one or more specific questions. Although they have provided us with considerable information, several important questions remain unanswered. Further experiments are planned to gain needed additional information.

In obtaining volunteers, groups of prisoners in the cell blocks were first called together and the nature of the proposed experiments described. Those interested were then asked to sign a release form which detailed all known information concerning the project, released Tulane University and State authorities from responsibility, and clearly stated that no reward could be provided for this service. The first step in screening was to eliminate all persons with a history even vaguely resembling a psychotic state in themselves or any member of the family. Potential subjects were then taken to the prison hospital where a careful screening interview was conducted with each candidate by at least 2 psychiatrists. A minimum of a seventh grade education was required. All of the prisoner volunteers fell into the diagnostic category of psychopathic personality since they displayed extractional behavioral trends to varying degrees. In each subject, evaluation of the motivation for the anti-social act for which they were imprisoned was a primary consideration. A careful appraisal of underlying dynamic character traits was attempted with the consideration that it might

be of some value in predicting the type of reaction they might show after the administration of the taraxein. There are 3 nonprisoner subjects in the series, all of whom received taraxein. One is a laboratory technician in our department and well known to us. The second manifested a low average intellectual level but no evidence of psychotic symptoms. The third was a known paranoid schizophrenic. He had been under treatment for some time and was in a state of remission in that his secondary symptoms of overt persecutory delusions and referential ideas with auditory hallucinations had subsided. Detailed reports of mental status examinations and histories on all subjects are available, but too lengthy to be included here.

The experimental design for each group and the questions to be answered by each were as follows (Table 1):

Group I.—This experiment, which included 2 subjects, was designed to answer the major question as to whether or not administration of the blood substance from schizophrenics which produced characteristic behavioral and subcorticogram changes in monkeys would result in schizophrenic-like behavior in humans. In contrast to the monkeys, the humans could report their thoughts and feelings, thus providing the data necessary to compare these reactions with behavioral changes seen in schizophrenic patients. Each of the subjects received 1 injection of active taraxein from pooled schizophrenic serum and 1 of the subjects first received 2 injections of an inert substance as a control.

Group II.—This experiment included 5 subjects and was designed to provide a larger and more thorough study with more controls. Each subject was examined by 4 psychiatrists. Psychological testing was conducted before, during, and at conclusion of the reaction. Very active substance was given to 2 subjects; normal saline to the third; the protein fraction obtained by the same procedure from normal serum was administered to the fourth subject; the fifth volunteer received a weak taraxein injection. The subject receiving the fraction from normals was later given a weak solution of taraxein. The weaker solutions provided information regarding dosage levels. In this experiment;

pooled serum subdivided according to the conventional subcategories of schizophrenia was employed.

Group III.—This was a heterogeneous group and included the 3 nonprisoner volunteers. Our motivation in administering taraxein to a schizophrenic in remission was to determine if there would be a difference in reaction from that seen in nonpsychotic subjects. Our reasoning was that we might obtain some leads as to possible underlying mechanisms in the phenomenon. Inclusion of the 2 additional subjects served to determine if residency in a state prison was prerequisite for the reaction.

Group IV.—This group included 6 subjects. Four were given taraxein. In addition, 6 injections of control substances were made, 3 of which consisted of the protein extracted by the taraxein isolation method from serum of normals and 3 were of the ceruloplasmin fraction from normal serum. As is apparent, some of the subjects received 2 injections, either 1 of taraxein and 1 of the substance similarly extracted from normal serum or 2 injections of different normal fractions (1 subject). In this experiment we selected as volunteers only first offenders who had minimal prison sentences in an attempt to obtain a prisoner group with the least degree of psychopathy. Also in this experiment, pooled serum subdivided according to the conventional diagnostic subcategories of schizophrenia was employed. Our purpose in doing this was to determine if the taraxein extracted from serum of patients with one particular subcategory of schizophrenia would, when injected, induce similar symptoms in the recipient.

Group V.—Two of the 4 subjects of this group received 2 injections at least $3\frac{1}{2}$ hours apart; a third subject, 3 injections each separated by at least $3\frac{1}{2}$ hours; a fourth subject received only 1 injection—a total of 8 injections: 5 of active taraxein; 1, the fraction extracted from normal serum; 1 of normal saline; 1, a weak solution of sodium amylal. All injections contained the same volume of fluid and were purposely made to be of exactly the same color. This experiment was designed to determine whether or not the same individual would react differently upon receiving taraxein of one sub-

category of schizophrenia than he would when receiving taraxein of another subcategory.

On all experiments, moving picture films were taken before and at various periods following the administration of the compounds.

RESULTS

All patients receiving taraxein developed symptoms which have been described for schizophrenia. This does not imply that each time we have processed taraxein, especially in the earlier stages, we obtained an active product. It has been our policy always to test at least 1 dose of each preparation on monkeys prior to setting up a study with human volunteers. The details of information we have gathered concerning the factors in processing which might inactivate this substance will be given in our paper on identification. With the exception of a few early occasions, we have always processed blood from normals along with that of the schizophrenics, usually isolating the ceruloplasmin as well as the fraction that comes out by the extraction method for taraxein. In monkeys we have given the fraction extracted from normal serum by the taraxein isolation method on 10 occasions to 7 monkeys without producing behavioral or EEG changes. In the 5 human subjects to whom this fraction obtained from normal serum was administered as a control, we induced no reaction. Likewise, in the 3 normal subjects we received ceruloplasmin extracted from normal serum, there was no reaction. There is, however, one questionable situation in regard to the administration of the protein fraction from normals which is detailed below under Complications. In none of the other control experiments which included 2 doses of known inactivated taraxein and, on 3 occasions the administration of saline, or Sodium Amytal, has there been any behavioral change.

Some rather consistent basic alterations in behavior have occurred in every subject receiving taraxein. This is in contrast to rather marked variability in secondary symptoms which have appeared. Basic alterations are similar to those described by Bleuler (11) as "fundamental symptoms." Secondary symptoms resemble Bleuler's "accessory symp-

toms." The onset of symptoms is gradual beginning in every instance between 2 and 10 minutes following the injection. Symptoms increased slowly in intensity reaching a peak between 15 minutes and 40 minutes, after which they begin to subside. The longest duration of clinically detectable symptomatology in the nonpsychotic population has been 2 hours. No residual abnormalities have ever been observed beyond this period except in the case of the 1 schizophrenic patient.

GENERAL REACTIONS

The characteristic general change is evidence of impairment of the central integrative process resulting in a variety of symptoms. There is marked blocking with disorganization and fragmentation of thought. There is impairment of concentration. Each subject has described this in his own words—some saying merely "I can't think"; "my thoughts break off"; others, "I have a thought but I lose it before I can tell you anything about it," etc. "My mind is a blank" is another common expression. It becomes impossible to express a complete thought. Often they will state only a part of a sentence. They appear generally dazed and out of contact with a rather blank look in their eyes. They become autistic, displaying a lessening of animation in facial expression. Subjective complaints of depersonalization are frequent. Attention span is markedly shortened with increase in reaction time. The symptoms often produce apprehension in the patients. The commonest verbalization of their concern is "I never felt like this in my life before." Virtually all have made this statement. Memory was impaired only during states of profound stupor. Recall was excellent in all cases except for what transpired during periods of deep stupor. Sensorium has always been clear when subjects are capable of reporting.

SPECIFIC REACTIONS

The test subjects have developed secondary symptoms of various types and degrees. In an effort to gain some knowledge as to whether or not the subcategories of schizophrenia represented different diseases, we

have carried out a variety of studies with the various test groups.

In the first test group of 2 subjects, 1 batch of taraxein was extracted from pooled serum of schizophrenics of various subtypes. Each subject received one-half the material and the secondary symptoms in one were predominantly catatonic whereas in the other they were predominantly paranoid.

In 3 of the test groups, II, IV, and V, taraxein was extracted from schizophrenic serum which was pooled in accordance with the classical subcategories, *i.e.* paranoid, catatonic, hebephrenic, and undifferentiated. There has been no consistent correlation between the presenting symptoms of the donors and those of the recipients with regard to secondary symptoms. On one or more occasions, symptoms characteristic of all the schizophrenic subcategories have been induced. Thirteen subjects in these 3 test groups received taraxein extracted from serum pooled according to subcategories. On 4 occasions, the recipient presented predominantly the symptomatology of the donor group, whereas on 9 occasions, predominant symptoms of the recipient fitted into schizophrenic subcategories other than those presented by the donor group.

After our experience with the first 2 prisoner volunteers, we were interested in determining if, on the basis of mental status examination, we could accurately predict the type of secondary symptoms that would be induced by the administration of taraxein. As indicated in our preliminary presentation, our predictions were not accurate. In Groups II, IV, and V, all examiners independently listed their predictions prior to the administration of the substance. Although there was almost universal agreement among the examiners, the reactions in the subjects were not at all in accordance with the predictions—in fact, the predictions were wrong in the majority of cases. It must be pointed out, however, that the predictions of the examiners were based on only one interview. It is possible that longer observation may have resulted in more accurate predictions, but this does not seem likely since the character traits in the group were quite distinct.

On 2 occasions (Group V), a single subject was given 2 test doses of taraxein ex-

tracted from patients with different types of schizophrenia. In 1 instance a subject first received taraxein from paranoid patients and developed some paranoid symptoms; namely, referential ideas, suspicion and auditory hallucinations. Later, after all effects had cleared, he was given taraxein from patients with undifferentiated schizophrenia which induced predominantly catatonic symptoms. The other subject, receiving 2 injections, first received taraxein from undifferentiated schizophrenics and developed a mild undifferentiated schizophrenic reaction with predominantly primary symptoms. His second injection of taraxein, after all symptoms had cleared, was from catatonic patients. This induced full-blown catatonic symptoms. It may be an important observation that the symptoms were much more intense in both individuals following the second injection.

In test Group IV in which all subjects were first offenders and whose history of antisocial behavior was shorter, the reactions were the same. Two subjects in Group V were also first offenders. Reactions were in no way different from those induced in more chronic offenders. In the 2 nonschizophrenic volunteers of test Group III, the induced reactions were again essentially the same. These observations indicate that the effect of taraxein on inducing schizophrenic symptoms is not related to intensity of psychopathic behavior nor to residency in state prisons.

The response in the 1 schizophrenic patient in remission who received taraxein was quite different from that seen in the non-psychotic volunteers. We know of no way to evaluate accurately intensity of reaction once full-blown secondary symptoms appear, but the symptoms induced were quite marked and were characterized by more profound depersonalization than those seen in the non-psychotic volunteer group. The principal differing characteristic, however, was the duration of reaction. The full-blown open psychotic symptoms induced persisted to a gradually diminishing extent for 4 days, in contrast with the maximum duration of 2 hours in the nonpsychotic volunteers.

Psychological tests given some of our taraxein subjects by H. E. King have shown clearly a defect in performance roughly ap-

proximating the dosage administered and the observed clinical effects.

COMPLICATIONS

In these clinical studies we have had two noteworthy complications. On 3 of the 18 occasions when taraxein was administered to humans, the subjects developed nausea and 1 subject vomited. These effects persisted for less than 5 minutes following the injection and prior to the onset of the psychotic symptoms. All occurred in the earlier experiments. We believe that they were caused by insufficient destruction of nonspecific proteins at one stage of the processing. With a minor modification of the processing, they have been eliminated.

Another serious complication occurred when one subject, receiving a fraction labelled as coming from serum of normals, developed a full-blown psychotic reaction. Though it appears that this was a case of mislabelling, we believe it necessary to report it along with all evidence surrounding the incident. The tubes were labelled by the chemists at 6:00 a.m. after they had worked on the procedure throughout the previous night without sleep. This fraction was processed along with several batches of schizophrenic serum. One batch of schizophrenic serum consisted of 2 doses of undifferentiated schizophrenic serum. One dose of the fraction labelled undifferentiated was active and produced psychotic symptoms in a human subject. When we administered the second dose labelled "undifferentiated" (other half of the total amount) to the same subject who developed a full-blown reaction from the fraction labelled "normal," it produced absolutely no response. We thought that if one dose consisting of one-half of the match of undifferentiated taraxein was active, then this second dose consisting of the other half of the same batch should have been also. On the basis of these factors, we strongly suspect that one dose of normal and one dose of undifferentiated schizophrenic fraction were mislabelled. In addition to this, we have administered the fraction extracted from normals to 5 other human subjects and 10 monkeys with no effect whatsoever. Despite this evidence, however, we recognize that because of this com-

plication we must test many more normal fractions before being absolutely certain that the effects cannot be induced by administration of the fraction from normals.

DISCUSSION

It is obvious that although we have accumulated considerable data there are still many unanswered questions. At this stage we feel it would be unwise to attempt to draw any sweeping conclusions or to enter into lengthy theoretical speculation. Our data tentatively suggest that schizophrenia, despite the nature of presenting symptomatology, may be one common disease entity. Several other factors seem apparent. One is that different test subjects have different thresholds for the appearance of psychotic symptoms with the administration of this substance. This is based on the observation that similar amounts from the same batch produce varying intensity of symptoms in different subjects. Also, duration of effects following the reaction vary considerably suggesting a different speed of breakdown of the substance. Although cognizant of the danger of speculating on the basis of one case, the results in our one schizophrenic subject suggest that in schizophrenic persons, the ability to detoxify this substance or a product formed by the interaction of this substance with some constituent of the human organism is impaired.

We have gained the impression, although it is difficult to substantiate, that the nature of the presenting symptoms is a function of dosage rather than of the recipient's character traits or the disease symptoms presented by the donor. So-called primary or fundamental symptoms have appeared with lower dosages whereas hebephrenic and catatonic symptoms predominate with high dosages. Supporting evidence for this speculation is the observation that a more intense color is usually noted in the precipitated fraction from catatonic and hebephrenic donors. Of course this observation is highly speculative since we as yet do not have a method for accurately quantitating the amount of taraxein present. Several questions have been raised concerning the similarities between reactions in subjects receiving this substance and those in volunteers receiving

the psychomimetic drugs, D-lysergic acid and mescaline. The principal difference is that subjects in this study have presented the characteristic picture of schizophrenia whereas those receiving the conventional psychomimetic drugs had only some schizophrenic symptoms and the most prevalent were typical of toxic psychosis (visual disturbances, disturbances of perception and sensorium, etc.). Our subjects have never shown symptoms of autonomic nervous system stimulation so characteristic of D-lysergic acid reactions.

We considered the possibility that an immune reaction might develop from taraxein which perhaps would render the subject insensitive to later injections. We therefore repeated the experiment after an interval of 11 weeks in one subject. Response to the second injection was virtually the same as to the first.

In our preliminary paper we reported that we had extracted taraxein from the blood of so-called pseudoneurotic or ambulatory schizophrenics. These were patients in our outpatient department who presented some fundamental or primary schizophrenic symptoms without secondary or accessory symptoms. We noted, however, that in order to produce a reaction in monkeys, taraxein from a larger amount of serum was required. As yet we have been unable to explore this area further, but hope to report on it in the near future.

SUMMARY

Work in progress centered about the isolation of taraxein from the serum of schizophrenic patients and its administration to

monkeys and human volunteers is presented. The taraxein was extracted from a variety of schizophrenic patients in 4 institutions and administered on 17 occasions to nonpsychotic human volunteers and on one occasion to a schizophrenic patient in remission. Several additional studies are planned or in progress and we expect that in the near future it will be possible to present considerably more information.

BIBLIOGRAPHY

1. Heath, R. G., Leach, B. E., Martens, S., and Cohen, M. Studies in Mind-Brain Relationships, Behavioral Changes with Administration of Taraxein, a Substance Extracted from Schizophrenic Serum. New York: Grune & Stratton, (to be published).
2. Heath, R. G., Peacock, S. M., Monroe, R. R., and Miller, W. H. Electroencephalograms and subcorticograms, Addendum E., pp. 157-197. *In* Studies in Schizophrenia, Cambridge: Harvard University Press, 1954.
3. Heath, R. G. Psychosom. Med., 17: 383, 1955.
4. Leach, B. E., and Heath, R. G. Arch. Neurol. & Psychiat., 76: 444, 1956.
5. Martens, S., Leach, B. E., Heath, R. G., and Cohen, M. Arch. Neurol. & Psychiat., 76: 630, 1956.
6. Altschule, M. D., Siegel, E. P., and Henneman, D. H. Arch. Neurol. & Psychiat., 67: 64, 1952.
7. Lahey, M. E., Gubler, C. J., Cartwright, G. E., and Wintrobe, M. M. J. Clin. Invest., 32: 329, 1953.
8. Cartwright, G. E., Huguley, E. M., Ashenbrucker, H., Fay, J., and Wintrobe, M. M. Blood, 3: 501, 1948.
9. Leach, B. E., Cohen, M., Heath, R. G., and Martens, S. Arch. Neurol. & Psychiat., 76: 635, 1956.
10. Holmberg, C. G., and Laurell, C. B. Acta. Chem. Scandinav., 2: 550, 1948.
11. Bleuler, Eugen. Dementia Praecox or The Group of Schizophrenias New York: International University Press, 1950.

THE EFFECT OF CULTURE CHANGE ON THE NEGRO RACE IN VIRGINIA, AS INDICATED BY A STUDY OF STATE HOSPITAL ADMISSIONS¹

DAVID C. WILSON, M.D., AND EDNA M. LANTZ²

Norman Cameron in his textbook *Behavior Pathology* describes desocialization as one of the abnormal reactions found among the mentally sick. He designates two causes, namely isolation, a voluntary action, and segregation, a separation from the group by group action(1). Since the Negro in Virginia had been segregated for years, it was decided to compare the mental hospital statistics for the white and the Negro in Virginia to see if there was any evidence in the state hospital population to substantiate Cameron's statement regarding the effect of segregation.

Virginia was a convenient state for such a comparison, because the Central state hospital, Petersburg, had admitted all the Negro patients committed in the state, and the other 3 state hospitals had admitted all white patients committed, regardless of overcrowding that might exist. This policy regarding admissions has been pursued for at least 50 years. Also the department of mental hygiene and hospitals of the State of Virginia, under the direction of Dr. Joseph Barrett, had established an admirable statistical department under the direction of Edna Lantz. The very efficient cooperation of Miss Lantz, a co-author of this paper, made the study possible.

The first study is shown in Table 1. Here the number of patients in the state hospitals is shown and compared to the white and Negro population. The rate per 100,000 shows 2 outstanding features; first, that the Negro ratio has always been greater than the white and second, that while the white ratio increased by 113 points, the Negro ratio increased by 343.6. The ratio per 100,000

TABLE 1

SUMMARY OF NUMBER OF PATIENTS IN HOSPITALS FOR THE MENTALLY ILL, MENTALLY DEFICIENT AND EPILEPTIC IN VIRGINIA, BY RACE AND RATIO OF PATIENTS TO THE GENERAL POPULATION. JULY 1, 1914 TO JUNE 30, 1954.

	White		Negro	
	Total in hosp.	Rate per 100,000	Total in hosp.	Rate per 100,000
Average 1914-19 ..	3,120	201.4	1,769	257.0
Average 1940-45 ..	7,118	353.4	4,069	613.8
Number June 30, 1954	8,561	314.6	4,681	600.6

Negro population has more than doubled in the 40 years.

There are so many reasons why patients stay in hospitals, that it was thought best to study admissions only. Therefore Table 2 was made to show a summary of first admissions and re-admissions of mentally diseased, mentally defective and epileptics in Virginia by race and rate per 100,000 population, 1914 to June 30, 1954.

This study of admissions gave us very similar results to those seen in Table 1. The white ratio had increased slightly, by approximately 20 points. The white rate of admissions had reached a peak in 1939 and had since been dropping. The rate for

TABLE 2

	White		Negro	
	Admissions	Rate per 100,000	Admissions	Rate per 100,000
Average for 1914-19..	1,160	75.0	576	84.1
Average for 1919-29..	1,155	68.2	521	77.1
Average for 1930-39..	2,043	113.3	727	111.6
Average for 1940-45..	1,980	98.3	931	140.3
Average for 1946-50..	2,248	97.9	1,035	151.6
Number for year ending 1954	2,630	96.7	1,148	147.3

¹ Read at the 112th annual meeting of The American Psychiatric Association, Chicago, Ill., April 30-May 4, 1956.

² Address: Univ. of Virginia Hosp., Charlottesville, Va.

TABLE 3

	White			Negro		
	First admissions	Population	Rate per 100,000	First admissions	Population	Rate per 100,000
Average 1918-25.....	801	1,617,909	49.5	439	691,278	63.5
1926-35.....	1,220	1,770,441	68.9	534	651,410	82.0
1936-45.....	1,433	2,015,583	71.0	728	662,190	109.9
1946-55.....	1,455	2,581,555	48.2	773	737,125	104.8

Negroes, however, had increased by 63.2 points and there was no similar peak.

It was decided then to study only first admissions. Table 3 shows the total first admissions to state hospitals by race, the population of each race in the state and ratio per 100,000 of white and Negro population.

Table 3 shows that the findings emphasized by the other tables are still present in the study of first admissions only. This study shows that the white population of Virginia has increased by nearly a million since 1918, while the Negro population has increased by only 46,000. This is especially remarkable since the Negro birth rate is higher than that of the white. The rate per 100,000 white during the last 10 years has decreased and now approximates the rate of 1918-25. The Negro rate of admissions per 100,000 Negro population is still increasing and is now more than double the white and 41 points higher than during the period 1918-25.

The argument has been advanced that mental illness among the Negroes was due in the main to feeble-mindedness, alcoholism and epilepsy. In order to study this question the first admissions to the state hospitals were studied when all admissions because of feeble-mindedness, alcoholism and epilepsy without psychosis were excluded. This study is presented in Table 4.

This study shows the same picture: namely the greater number of Negroes ad-

mitted per 100,000 population and the great increase of mentally ill Negroes admitted during the last 10 years over the earlier years, when the ratio to population is considered. There is also this marked drop in the ratio of white admissions during the last 10 years.

This study ruled out mental deficiency, alcoholism and epilepsy as the cause of the difference between white and Negro and between Negro in 1918 and Negro in 1954.

This difference in admission rate is shown more accurately by Table 5 which gives the percentage of the total population, white and Negro, as well as the percentage of admissions, white and Negro.

This study shows the decline in admissions proportionately of the white, the relative decrease in the Negro population, but the continued increase in the Negro admissions.

Since mental deficiency, alcoholism and epilepsy did not explain the difference noted in the first study, another division of first admissions was made under separate categories according to diagnosis. This was done to see if any one mental disease syndrome could be held accountable for the differences noted.

Table 6 shows the result of this study. In this table the rate per 100,000 of the population of the race under consideration is given in each one of the categories con-

TABLE 4

FIRST ADMISSIONS AFTER DEDUCTING PATIENTS ADMITTED BECAUSE OF ALCOHOLISM, MENTAL DEFICIENCY, AND EPILEPSY WITHOUT PSYCHOSIS, 1918-1955.

	White		Negro	
	First admissions	Rate per 100,000	First admissions	Rate per 100,000
1918-25....	737	45.5	411	59.4
1926-35....	952	53.8	474	72.7
1936-45....	1,038	51.5	626	94.5
1946-55....	962	37.2	676	90.1

TABLE 5

PERCENTAGE OF TOTAL POPULATION, WHITE AND NEGRO, AND PERCENTAGE OF TOTAL FIRST ADMISSIONS, WHITE AND NEGRO.

	White		Negro	
	% of population	% of admissions	% of population	% of admissions
Average 1918-25...	70.1	64.2	29.9	35.8
1926-35...	73.1	66.8	26.9	33.2
1936-45...	75.3	62.4	24.7	37.6
1946-55...	77.8	58.9	22.2	41.1

TABLE 6
RATE PER 100,000 PER RACIAL POPULATION

	White					Negro				
	Cerebro-art. senile	Schizo.	Manic dep.	Syph.	Alcoh.	Cerebro-art. senile	Schizo.	Manic dep.	Syph.	Alcoh.
1920....	6.1	6.4	10.3	1.4	1.1	9.5	12.0	16.5	2.4	0.4
1930....	9.1	9.4	18.9	1.9	8.1	19.6	16.1	9.4	7.8	0.6
1940....	15.6	9.0	5.8	3.2	22.1	20.8	10.4	25.2	14.6	2.4
1950....	15.0	6.4	2.1	0.9	12.0	25.2	14.2	14.0	13.1	5.6
1955....	16.1	7.2	1.3	1.0	8.7	22.4	21.7	5.5	7.1	4.3

sidered. These figures are given for the census years, since the figures can be checked more accurately by the population figures. This is done for all the years except 1955, which is estimated.

This study shows that for the white race, patients with cerebro-arteriosclerosis or senile psychosis, there has been an increase in rate. The rate for schizophrenia increased and then diminished slightly while the diagnosis of manic-depressive psychosis has been made much less frequently. There has been no increase in the number of patients with syphilis, but an increase in the number admitted because of alcoholism. The Negroes have a higher rate as well as increase in the senile-arteriosclerotic group, as well as those diagnosed as schizophrenia. The group diagnosed manic-depressive is larger, while those admitted because of alcoholism is smaller than the white. Those admitted because of syphilitic infection are more numerous than the white and more in 1955 than in 1920, but the difference is not sufficient to answer the problem. The table shows quite definitely that the reason for a larger ratio per 100,000 of Negro patients admitted now than 30 years ago, and also a higher rate of Negro admissions than white, is that the rate of senile-arteriosclerotics and especially of

the patients admitted because of schizophrenia is higher. The rate per 100,000 of schizophrenics for the white changed from 6.4 in 1920 to 7.2 in 1955, while the rate for Negro admissions, which was 12.0 in 1920, changed to 21.7 in 1955. The greater number of admissions of Negroes in the senile-arteriosclerotic and the schizophrenic groups than whites, as well as the striking increase in the rate per 100,000 for Negroes in the 2 diagnostic categories, indicates that it is Negroes suffering from these 3 conditions that makes the difference in the number of admissions found to exist for the two races throughout the years and in the number of Negroes admitted in 1920 as contrasted with those in 1955.

The admissions in the senile arteriosclerotic group for both races increased during each decade, but the rate for the Negro was always greater. The Negro, because of his economic status, would be more inclined to transfer the care of the older members of the race to the State. As we wish to know whether segregation of the Negro was a factor in causing the difference in the hospitalization of the two races, it was thought proper to compare the tendency of both races to hospitalize patients over 65. This comparison is shown in Table 7.

TABLE 7

FIRST ADMISSIONS OF PATIENTS OF 65 AND OVER COMPARED BY NUMBER, RATE PER 100,000 OF POPULATION OVER 65 FOR EACH RACE, AND THE PERCENTAGE OF THE TOTAL ADMISSIONS

	White			Negro		
	No.	Rate per 100,000 white pop. over 65	Percentage of total admissions	No.	Rate per 100,000 Negro pop. over 65	Percentage of total admissions
1920.....	120	161	14.2	52	203	12.7
1930.....	175	192.2	15.2	82	320	14.7
1940.....	209	176.6	14.0	113	333.6	14.7
1950.....	213	123.8	16.2	153	360.5	20.0
1955*.....	474	241.9	32.6	155	327.2	18.9

* Estimated

The outstanding findings in this table are that while more Negroes over 65 are being admitted in 1955 than in 1920 and the rate per 100,000 of Negro population over 65 has gone up, the percentage of total admissions is not as great as the white. In other words, more white people are admitted who are over 65 and it is not the presence of old people that explains the preponderance of senile and cerebro-arteriosclerotic mental disease among the Negroes. One startling find was the great increase of the white population of Virginia over 65 during the last 10 years and the fact that there has been no such increase in the number of Negroes over 65. The Negroes die younger.

In conclusion then, the stress and strain of life and not just the aging process produces the senile and arteriosclerotic psychoses among the Negroes. The segregation of the Negro can be considered as one of the stresses of the Negro's life.

There were 2 other findings in our initial study that seemed worth further investigation. The first was the apparent decrease in white admissions to state hospitals in Virginia. Is it possible that this finding was due to a decrease in mental disease among the white that was not shared by the Negro? The second finding was the very slight increase in the Negro population in Virginia since 1914, in spite of a relatively high birth rate. If this could be explained by the migration of the Negro to the North, would it be the mentally healthy Negro who migrated and left those more disturbed at home, thus accounting for the situation found in Virginia?

In order to answer the first question it was thought best to attempt to get a cross section study of the number of Virginians hospitalized for mental disease during 1954. In Virginia there are 3 private hospitals, 1 state supported private hospital, and 2 psychiatric wards in general hospitals connected with the 2 medical schools. There are 2 V.A. hospitals that take mental patients. These institutions do not account for all the hospitalized Virginians since many are in V.A. hospitals outside the state and a few enter private institutions in other states, such as Maryland, North Carolina and Connecticut. An effort

was made to canvass most of these institutions. Table 8 shows the results of this study.

The figures for the V.A. hospitals were taken from a survey of the V.A. hospitals. The figures for institutions outside of the State were based on letters from 10 private institutions answering to questionnaires. The figures from the Tucker Sanatorium are not official, but are certainly a very close estimate of the admissions to this hospital. It must be remembered that many of the patients admitted to the private hospitals have minor mental illnesses. They are not committable, therefore their numbers cannot be compared to the figures for the Negroes who are practically all sick enough to call for commitment.

The study indicates that the decline in state hospital admissions for the white race is due to the increase in the use of other facilities for the care of the mentally ill. The rate per 100,000 population for the Negro race is still higher, but about what is to be expected from the study of previous years. Before 1940 the private institutions and the psychiatric wards did not exert such an influence as they have since.

The migration to the North and Northwest started to have an effect on the Negro popu-

TABLE 8

NUMBER OF FIRST ADMISSIONS OF VIRGINIANS TO HOSPITALS TREATING MENTAL ILLNESS, EXCLUSIVE OF PATIENTS ADMITTED BECAUSE OF MENTAL DEFICIENCY, ALCOHOLISM AND EPILEPSY WITHOUT PSYCHOSIS, IN THE YEAR 1954.

	White		Negro	
	No. of admissions	Rate per 100,000 white population	No. of admissions	Rate per 100,000 Negro population
Psych. ward, U. of Va..	400	—	36	—
Psych. ward, M. C. V..	450	—	1	—
V. A. Hospitals* . . .	400	—	300	—
St. Albans Sanatorium.	183	—	—	—
Westbrook Sanatorium.	80	—	—	—
Tucker's Sanatorium* .	350	—	—	—
DeJarnette's Sanatorium.	141	—	—	—
Priv. Inst. Outside of Va.*	75	—	—	—
State Hospitals	1020	—	762	—
Total	3099	111.0	1099	141.9

* Estimated

lation of the South soon after 1914. Table 9 indicates the condition of those Negroes who lived in the North, as far as mental disease is concerned. The rate for New England could be given only for 1922. The rate for New York is compared with that of Alabama and Louisiana.

The admissions of Negroes to state hospitals in northern states are certainly higher per 100,000 than in the South. Malzberg, in 1940, reported an incidence of schizophrenia (based on hospitalized cases and standardized for age) of 16.9 per 100,000 for native white persons of native parentage, 26.4 for native white persons of foreign parentage, and 32.8 for foreign born persons, and 51.1 for Negroes (2). We can conclude, therefore, that the incidence of mental disease among the Negroes of Virginia is certainly not increased because the more stable members of the race have migrated to the North. Indeed it would appear that the more stable ones stayed at home.

SUMMARY

1. A study of white and Negro patients hospitalized for mental illness in the State of Virginia shows a higher ratio for Negro patients when the rate per 100,000 population of respective races is considered. Also there is a tremendous increase of Negro admissions now as compared to 1914.

2. This same finding is reflected in a study of first admissions of the mentally ill.

3. This difference is not due to mental deficiency, alcoholism or epilepsy without psychosis.

4. The difference is due in the main to the number of Negroes admitted for senile psychosis, arteriosclerotic dementia, or schizophrenia. This figure is larger than that for similar white admissions and greater now than in 1918.

5. The number of Negroes admitted because of senile and arteriosclerotic diseases is not due to the admission of more older Negroes than white, because persons 65 and over make up a greater percentage of white admissions than of Negro. Also the increase in admissions of Negro patients 65 and over has not sufficiently increased over the years to explain the difference between admissions now and 40 years ago.

6. The rate of first admissions to mental hospitals per 100,000 of Negro population in Virginia, while higher than the white, is lower than the rate in northern states. This would indicate that the migration of Negroes to the North did not increase the rate per 100,000 of those Negroes who stayed in Virginia. The probabilities are that the more unstable members of the race migrated.

7. The apparent decrease of rate in the admission of white patients to the state hospitals during the last 10 years is due to other facilities for treatment, such as the private hospitals and the psychiatric wards in general hospitals.

TABLE 9

FIRST ADMISSIONS TO STATE HOSPITALS COMPARED BY NUMBER, RATE PER 100,000 OF THE POPULATION OF THE TWO RACES.

State	Year	White		Negro	
		Number	Rate per 100,000	Number	Rate per 100,000
New England..	1922	7,669	104.8	182	230.2
New York....	1922	8,230	86.9	324	163.2
	1934	10,442	85.9	904	218.9
	1944	11,923	92.6	1,104	193.2
	1953	13,967	99.2	2,176	237.0
Alabama	1922	350	24.2	277	30.8
	1938	944	55.2	422	44.6
	1946	906	49.0	457	46.4
	1951	883	42.5	500	51.0
Louisiana	1922	665	60.6	404	57.7
	1954	1,902	105.8	945	107.1

DISCUSSION

The history of the United States over the last hundred years is one of change. The industrial revolution, the origin of great cities and the rise of both capitalism and organized labor have been only a few of the many rapid changes that have affected American life. However, the most rapid change, and perhaps the most extensive during the last 50 years, has been found in the South. The culture has been changed from predominantly rural and based on agriculture to urban and industrial (3). This period of change has involved all the people living in the area and has put pressures on each individual that always accompany change. Mar-

garet Mead in *The Introduction to Cultural Patterns and Technical Change*, states

While it is still not possible to say that a given culture is less conducive to mental health than another, because of our lack of cross-culture criteria for mental disorders, it is possible to say that under situations of stress and strain, of rapid change and consequent disorientation, there is likely to be an increase in manifest mental ill health(4).

In the South, therefore, during the last 50 years, there has been a steady migration from farm to city and from agriculture to industry. This change began soon after the Civil War, but has become accelerated especially in Virginia during the last 20 years. This change, with many others has altered the way of living in the South and undoubtedly has had a great deal to do with the manifest mental illness found in that area. Within the same area, however, the most profound has been the colored segment of the population.

Before 1865 the Negro culture as a whole was a slave culture. From 1865 to 1877 the Negro was given equal rights as a citizen by the 14th and 15th amendments to the Constitution. From 1877 to 1915 the Negro was segregated under the definite concept that he was an inferior being, lived in a culture of his own, and was supposed to know his place, which though respected, was nevertheless subservient to the white. The Negro was supposed to be very happy, very religious and free from the usual anxieties that troubled the white.

For approximately 50 years the Negro-white status was nearly stationary. White and Negro intermingled but with the relation of master to servant(5).

During World War I several things happened to change this condition. The Negro was well received abroad and found that there were places in the world where white and black lived together. There was the beginning of the industrialization of the South and the great movement from the farm to the city. The migration of the Negro to the North and Northwest began in earnest and has continued to the present day. Next came the depression and the Roosevelt administration, which brought the first legal successes of the Negro; then World War II when the Negro fought shoulder to shoulder with white, and finally the post-war period. Now

the Negro has won repeated legal battles, has become a political power to be reckoned with, and has wealth and power enough to be influential in the business world. There is now a substantial Negro middle class, and the wages paid the Negro are higher than ever before. The Negro no longer works on the small farm or as a domestic but has a position in the city or in industry.

Where the Negro of 1915 was poor, illiterate and a servant, now he is better dressed, owns his home and probably a car. He can go to high school, to college or university. He makes and spends more money, yet the last 40 years have been an uneasy time. There has been no definite place he could call his own. He is constantly stirred up by his needs, as well as by the propaganda of his leaders, by the Communists and by those politicians who would use his power. The labor unions came into the South and organized both white and black labor. The F.E.C.P. and the minimum wage law were enacted.

The Negro has improved economically since 1940. He has moved from an agricultural to an urban culture, as has the white man. He has been industrialized. He migrated to the North to better his condition. In spite of all this, he is more segregated now than 40 years ago and while then his status was fixed, now he has no status as he moves from a culture of his own into a white culture(6).

Forty years ago the Negro and white family lived across the street from each other. The children played together and the adult Negroes worked in the home or on the farm. The Negro had a definite status and in that position he was supposed to be happy while he sang his songs and prepared for the next world.

The relationship between white and colored was that of master and servant. The Negro had a place which was honorable and respected but definitely inferior. The white children of today do not know the Negro. The Negro servant has gone from the home and the Negro child is very closely segregated. The Negro of today is an unknown person, certainly until he reaches college or graduate school.

Cultural changes which are forced on a

people against their will, by fiat or by authority from outside or above have been found by the experts of the U. N. to produce major disturbances of mental health. Margaret Mead in her book recommends that such changes be brought about by understanding and cooperation at all levels of the culture. The total person and the total culture must be considered and the change must be made slowly with due consideration for the psychological make-up of the individuals. She points out that frustration of a subculture has the same effect as frustration of the individual.⁷ There will be regression and a return to more primitive forms of living. Richard L. Jenkins in his book *Breaking Patterns of Defeat* describes the average American Negro community as poor and under-privileged. It is characterized by more primitive, uninhibited living. The causes are undoubtedly cultural; the results are aggressive crimes and psychosis.

A social or a culture situation which gives rise to insoluble problems and much frustration may be expected to result in a higher incidence of schizophrenia than a social or culture situation which gives rise to less frustration(8).

Dr. Jenkins compares the Negro with the Jew as far as their ability to stand segregation is concerned. The Negro has a very loosely constructed family organization, and worships strength. The Jew has a very closely knit family and can admit weakness. The former culture under stress yields psychoses and aggressive crimes, while the latter develops psychoneuroses and the ability to stand suffering without retaliating.

The annual report of the department of welfare and institutions on commitments to county, city jails and city jail farms in the State of Virginia for the year ended June 30, 1955 gives us the following table.

TABLE 10
JAIL COMMITMENTS FOR THE YEAR ENDING
JUNE 30, 1955.

	White		Negro	
	No.	No. per 100,000 white population	No.	No. per 100,000 Negro population
	66,011	2,382	44,380	5,587
For drunkenness.	28,524	1,029	13,129	1,652

This table shows that the Negro community exhibits the other characteristic of a frustrated community, namely crimes of aggression.

The Negro in Virginia is far better off economically and legally than ever before but he is more closely segregated. He has lost the security of his own culture and is moving rapidly toward a middle class white culture. This period of uncertainty and close segregation parallels the increase in the rate of Negroes admitted to the state hospitals of Virginia for cerebro-arteriosclerosis, senile dementia, and especially for schizophrenia. Very few, if any, of the steps recommended by sociologists and cultural anthropologists, who are experts in culture change, have been carried out to protect the Negro or the white man as this change in relationship is brought about. It seems to us most reasonable to believe that the preponderance of mental disease in the Negro over the white man and its increase in ratio to Negro population in Virginia is due to segregation and to the period of uncertainty accompanying culture change.

CONCLUSION

A study of state hospital statistics for the State of Virginia from the year 1914 to the year 1955 shows the following:

1. There has been a larger ratio of Negroes admitted to state hospitals per 100,000 population of Negroes than of white per 100,000 white population throughout the 40 years.
2. There has been a tremendous increase in the admission rate for Negroes per 100,000 Negro population over the 40 years and the present rate practically doubles that of 1914.
3. This increase in rate is due mainly to an increase in senile psychoses, cerebro-arteriosclerosis and schizophrenia. Admissions for schizophrenia parallel in their behavior most closely the increase in the ratio.
4. The Negro has experienced similar changes to those of the white during this period with 2 additional factors: segregation has become more severe; and he is no longer the servant but the equal of the white.
5. It is felt that the fact that there is more mental illness among the Negroes of Virginia than among the whites and more mental ill-

ness among the Negroes in 1954 than in 1914 is due in large degree to segregation and to the uncertainties of the Negro race as they cross from one culture to another.

BIBLIOGRAPHY

1. Cameron, N., and Cameron, M. A. Behavior Pathology. Boston: Houghton-Mifflin Co., 1951.
2. Malzberg, B. Social and Biological Aspects

of Mental Disease. Utica: N. Y. State Hospitals Press, 1940.

3. Key, V. A. Va. Quart. Rev., 31: 163, 1955.
4. Mead, M. Cultural Patterns and Technical Change. New York: New American Library, 1955.
5. Daniels, J. Va. Quart. Rev., 31: 219, 1955.
6. Hilland, H., and Greenberg, J. Citizen's Guide to Desegregation. Boston: Beacon Press, 1955.
7. Mead, M. Cultural Patterns and Technical Change. New York: New American Library, 1955.
8. Jenkins, R. L. Breaking Patterns of Defeat. Philadelphia: J. B. Lippincott Co., 1954.

PSYCHIATRIC MANAGEMENT OF SUICIDE PROBLEMS IN MILITARY SERVICE¹

WILLIAM OFFENKRANTZ, M.D., EDWIN CHURCH, M.D., AND ROBERT ELLIOTT, M.D.^{2, 3}

This study was designed to determine the characteristics of individuals who threaten or attempt suicide and are brought to the attention of the military psychiatrist; and to test a method of management intended to prevent further suicide attempts.

METHODS AND MATERIALS

Individual Characteristics of the Population.—The subjects for this study were cases from an outpatient neuropsychiatry ("Mental Hygiene") clinic at the U. S. Army Hospital, Fort Devens, Massachusetts, during the months immediately following cease-fire in Korea. The observations cover the period August 1953 to December 1954. Many different types of units comprised the base, including a large prison stockade and 29 General Reserve Units in training. Among the latter, distribution by service function was as follows: 2 signal corps, 9 quartermaster, 6 medical, 8 ordnance, and 1 finance. Also stationed there was the major portion of a regimental combat team and a large school of the Army Security Agency. Some of the pertinent characteristics of peacetime military life at Fort Devens, as elsewhere, were discipline with or without harassment, enforced closeness, boredom, real and imagined inequities in assignment, and extra-military personal problems.

The 75 patients chosen were soldiers or civilian dependents. During the 15 months of the study, 54 threatened and 21 attempted

suicide and were brought to the attention of one of the 3 psychiatrists at the Army Hospital. A comparison⁴ group was established by selection of every tenth chart from the files of the Mental Hygiene Clinic during the same period. In this group were 2 cases from the suicidal series, which may represent the incidence of the problem of suicide in the Clinic's case load.

The general characteristics of the suicidal group were compared with those of the random sample to determine whether the two could be distinguished. Data were gathered describing age, circumstances of referral, referral source, military rank, race, mode of entry into service, diagnosis,⁵ religion, marital status, length of service, education, follow-up for continuation of life and military career, and the distribution of the cases among the Clinic's 3 doctors (approximately one-third being seen by each).

Method of Management.—The method of management was evolved from the following: (1) clinical interviews which gave no evidence of depression or psychotic confusion in an age group in which depressions are infrequent; (2) an impression that these soldiers and civilian dependents frequently gave historical evidence of crudely manipulative or delinquent behavior without evidence of symptomatic depression or psychosis; and (3) a hypothesis that the suicidal threat or attempt was an extension of this behavior: a method of emotional blackmail, moving people about the patient in ways that would make him more comfortable. This hypothesis was based in part upon the psychiatrists' reactions during the interviews with these patients.

⁴ This was called a "comparison" rather than a "control" group because the latter should have had a different kind of management for the same suicidal threats and attempts.

⁵ With regard to criteria for diagnosis, we adhered to the U. S. Army's Standard Diagnostic Nomenclature, which is similar to that of The American Psychiatric Association.

¹ Read at the 112th annual meeting of The American Psychiatric Association, Chicago, Ill., April 30-May 4, 1956.

² Authors' addresses are, respectively, School of Medicine, Univ. of Southern Calif., Los Angeles, Calif.; 299 Holt Drive, Pearl River, N. Y.; 8100 E. Jefferson, Detroit, Mich.

³ Grateful acknowledgement is made to David Rosenberg, Ph.D. (psychologist), and John R. Whittier, M.D. (director, Creedmoor Institute), for their assistance in the preparation of the manuscript; and to Mandel E. Cohen, M.D. (neuropsychiatric consultant).

The technique of management was as follows:

1. A personal interview was held with each patient by one or more of the 3 psychiatrists.
2. The psychiatrist who saw the patient discussed the information in the history, whether it had initially been elicited by that doctor or not, in an effort to establish rapport by making clear that the psychiatrist's interest extended to the point of informing himself about who the patient was and how he came to be there.
3. During this procedure the doctor arrived at a diagnosis, and an understanding of the nature and extent of the problem, based upon the history, the mental status, and (infrequently) the use of psychological testing.
4. Each patient was then told, by the use of the information that had been obtained, that the doctor understood his unhappiness.
5. He was told that he could not be helped in terms of his concrete demands: for hospitalization, for discharge, for change of assignment, for transfer, for change of physical profile, for light-duty slip, etc.
6. He was told that it was unfortunate, but true, that if he really needed to kill himself, the psychiatrist did not feel that anyone could stop him, and that therefore no one but the patient could keep himself alive.
7. He was told that if he killed himself it would be considered the act of a sane man on the basis of the interview, and his family would therefore lose any material benefits resulting from his death. He was also told that if he subsequently tried to kill himself and did not succeed, the army regulations provided that he would have to stand court martial for the offense.⁶
8. Whenever possible the referring physician, commanding officer, or other referral source was informed of these steps and encouraged to manage the patient in the same way, with the responsibility for such management resting upon the psychiatrist.
9. None of the patients was hospitalized and none was given a return appointment.⁷

⁶ The setting of these limits without a hostile context, hence without provoking retaliation on the part of the patient, was the crucial performance on the part of the psychiatrist.

⁷ The same procedure (steps 1 through 9) was

RESULTS⁸

The suicidal group was significantly younger than the comparison group (Table 1-A). The majority were in the 20 to 25 age range. Their mean age was 22.0 years; that of the comparison group 24.6 years. Fisch(1) reports the average age in his study as 23; Arieff, McCulloch and Rotman(2) as 20 to 30; and Schmidt, O'Neal and Robins(3) report the average age of the men in their study as 44; the women as 34.

The population was predominantly Caucasian (Table 1-B). There was no significant difference between the comparison and suicidal group with regard to marital status (Table 1-C); and none in religious preference (Table 1-D).

No significant difference appeared in the length of education (Table 1-E). Figures for the educational level attained within the suicidal group showed that 72% had more than 8 grades of education. This agreed with the experience of Arieff, McCulloch and Rotman(2) who found that in a series of 500 cases of attempted suicide, 76% had gone beyond the eighth grade.

There was no significant difference in the mode of entry into service between the two groups (Table 2-A). However, 3 attempts in a group of 17 draftees (1 to 5.7) when compared with 13 attempts in a group of 46 enlistees (1 to 2.5), is perhaps at least of borderline significance.

Table 2-B compares the length of service of the two groups. As might be expected, because of a positive correlation between months of service and chronological age, the suicidal group as a whole had less time in the army (Table 1-A). This difference was especially noticeable after 72 months of service. This is in accord with one of the original

followed with the civilian dependents with appropriate variations.

⁸ It was felt that suicidal patients resembled other neuropsychiatric patients more closely than they resembled soldiers in general. It follows, then, that the significant differences between suicidal and non-suicidal individuals do not stand out in this study as clearly as they might otherwise, because we selected a comparison group of other neuropsychiatric patients. Consequently we emphasize whatever differences appear in the tables by liberal use of the word "significant."

TABLE 1

A. AGE IN YEARS OF COMPARISON AND SUICIDAL GROUPS

	Comparison	Total	Suicidal Threat	Attempt
Under 20	6	22	17	5
20 to 25	50	44	32	12
26 to 30	9	5	3	2
31 to 40	7	3	2	1
Over 40	3	1	0	1
Totals	75	75		

B. RACE OF COMPARISON AND SUICIDAL GROUPS

Negro	4	5	3	2
Caucasian	71	69	51	18
Mongoloid (Japanese)	0	1	0	1
Totals	75	75		

C. MARITAL STATUS OF COMPARISON AND SUICIDAL GROUPS

Single	40	47	36	11
Married	34	27	18	9
Divorced	1	0	0	0
Separated	0	1	0	1
Totals	75	75		

D. RELIGIOUS PREFERENCE OF COMPARISON AND SUICIDAL GROUPS

Catholic	32	36	28	8
Protestant	31	34	23	11
Jewish	7	2	2	0
Unknown	1	2	0	2
None	4	1	1	0
Totals	75	75		

E. YEARS OF EDUCATION OF COMPARISON AND SUICIDAL GROUPS

8 or less	20	21	17	4
9 to 12	41	36	26	10
13 to 16	10	12	9	3
Unknown	4	6	2	4
Totals	75	75		

premises concerning the age range of the suicidal group in military service.

Comparison of military rank for both groups (Table 2-C) indicates an overwhelming predominance of privates with a negligible number of commissioned officers. These data agree with those of Fisch(1) who found only 4 commissioned officers in his series. The majority of his cases were in the bottom two enlisted ranks. Again this is probably at least partially a function of age.

Table 2-D indicates that the greatest frequency of referrals in both groups was from medical doctors in the unit dispensaries. This is probably a function of the way sick call was used by this group of soldiers to complain about army life in general, rather than

TABLE 2

A. MODE OF ENTRY INTO SERVICE OF COMPARISON AND SUICIDAL GROUPS

	Comparison	Total	Suicidal Threat	Attempt
Drafted	18	17	14	3
Enlisted	49	46	33	13
Civilian dependents *	8	12	7	5
Totals	75	75		

B. MONTHS OF SERVICE OF COMPARISON AND SUICIDAL GROUPS

0 to 36	44	50	40	10
37 to 72	15	11	6	5
72 plus	8	2	1	1
Civilian Dependents *	8	12	7	5
Totals	75	75		

C. MILITARY RANK OF COMPARISON AND SUICIDAL GROUPS

Private	44	50	38	12
Private first class ..	8	5	4	1
Corporal	2	4	3	1
Sergeant	9	3	2	1
Sergeant first class	0	1	0	1
2nd Lieutenant ..	3	0	0	0
Colonel	1	0	0	0
Civilian dependents *	8	12	7	5
Totals	75	75		

D. REFERRAL SOURCE OF COMPARISON AND SUICIDAL GROUPS

Commanding officer	15	11	10	1
Medical doctor ..	37	37	26	11
Self-referred	9	12	10	2
Confinement personnel	12	6	3	3
Defense counsel ..	1	2	2	0
Inspector general ..	1	0	0	0
Family	0	4	1	3
Chaplain	0	3	2	1
Totals	75	75		

* All females.

(Continued on next page)

TABLE 2—Continued

E. DIAGNOSES OF PATIENTS IN COMPARISON AND SUICIDAL GROUPS

	Comparison	Total	Suicidal Threat	Attempt
Total Immaturity reactions	21	38	27	11
Emotional insta- bility	11	23	15	8
Passive- dependency ..	5	7	6	1
Passive- aggressive ...	4	7	5	2
Aggressive	1	1	1	0
Total Character disorders	14	25	20	5
Inadequate per- sonality	3	6	6	0
Antisocial	5	9	6	3
Asocial	3	3	3	0
Schizoid	1	4	2	2
Paranoid	0	2	2	0
Hysterical	1	1	1	0
Addiction	1	0	0	0
Total Psychoneu- roses	4	2	1	1
Obsessional- compulsive ..	1	0	0	0
Depression	1	0	0	0
Anxiety	1	1	0	1
Mixed	0	1	1	0
Somatization ..	1	0	0	0
Acute Situational maladjust- ment	8	5	2	3
Neurological prob- lems	12	0	0	0
Mental deficiency .	2	1	1	0
Total Psychoses .	1	0	0	0
Manic-depres- sive	1	0	0	0
Schizophrenia .	0	0	0	0
No psychiatric disease	13	4	3	1
Totals	75	75		

of a particular physical illness. It was also, to some extent, a reflection of the referral procedure at the particular army base which required that almost every patient be seen by a doctor before coming to the Mental Hygiene Clinic. In addition, as the majority of

threats were revealed after coming to the Clinic (Table 3-A), it is clear that the large number of patients referred by physicians does not necessarily indicate that they were the first persons to whom the threat was revealed. However, the person indicated was always the first to know about the threat and to be in a position of responsibility for the soldier's welfare. Table 2-D seems to indicate a significant difference between the number in the two groups who were referred from confinement personnel.

Analysis of the attempts (Table 3-B) indicates slashing of wrists by far the most frequently chosen means. It might be expected that some attempts would involve the use of firearms, but it was extremely difficult for soldiers in garrison to gain access to loaded weapons except on the rifle range. Several authors comment on the relation between the method chosen for suicide and the seriousness of the attempt. Fisch(1) studied 114 suicidal attempts among which there was one death. He notes cutting of the wrists and ingestion of drugs or poisons as the most common methods. On the other hand, among 46 deaths by suicide among naval personnel during the same period,

TABLE 3

A. MILITARY PERSONNEL TO WHOM SUICIDE THREAT FIRST REVEALED

	Male	Female
Mental hygiene clinic interview....	35	6
Medical doctor	7	1
Confinement personnel (Military police, etc.)	1	0
Commanding officer	2	0
Chaplain	1	0
Defense counsel	1	0
Totals	47	7

B. NATURE OF SUICIDAL ATTEMPTS

Slashes: wrists, antecubital fossa...	6	1
Punctured tympanic membranes....	1	0
Strangulation (with belt).....	1	0
Lying on road.....	1	0
Carbon monoxide fumes (this patient died of CO poisoning).....	1	0
Gas range fumes (Methane).....	1	0
Drugs (Aspirin, "Nerve" pills, or unspecified)	2	3
Unspecified poisons	1	0
Unknown	2	1
Totals	16	5

shooting and gas inhalation were the two most common methods employed. Hendin (4) reports that in his series inhalation of illuminating gas and hanging were the most common methods used in successful attempts. He found that cutting and ingestion of sleeping pills were more common in unsuccessful attempts. Stengel (5) reports that 25% of his series ingested drugs, with wounding and coal gas inhalation as next most common. Arief, *et al.* (2) assert that the method chosen serves as a fairly reliable index to the genuineness of the desire to die. Oliven (11) makes a similar statement.

Comparison of the diagnosis (Table 2-E) indicates a significantly larger number of "character disorders" and "immaturity reactions" among the suicidal group. Among the comparison group there was a larger number of "neurological problems," as well as "no psychiatric disease." These findings are in agreement with those of some workers and in conflict with those of others. For example, Teicher (6) in a study of 30 suicidal attempts among naval personnel reports that 24 were "insecure, inadequate, immature personalities." Fisch (1), in studying 114 attempts among naval and marine corps personnel, reports 43 "immaturity reactions," 23 "personality disorders," and 32 "psychotic reactions." Laufer and Casriel (7) reported on suicidal gestures among occupation personnel on Okinawa and found "most" of their cases to be "immaturity reactions." Raines and Thompson (8) however, in discussing 164 gestures and attempts found only 15 "character disorders" and 62 "schizophrenics," with 22 others classed only as "delirium."

Table 4 presents results of a follow-up study for continuation of life and outcome of service from 5 to 19 months after the patients were first seen. The most recent data were collected in July 1955. One patient in the suicidal group had died by suicide.⁹ For the rest, the table indicates a sig-

⁹ We have no other explanation for this death save a lack of diagnostic acumen. Within 12 hours after being seen at the Clinic, the patient went home on pass to his family's farm in New Hampshire. There he killed himself by driving a car behind the barn and running a vacuum cleaner hose from the exhaust pipe into the car. Obviously this was not an accidental death.

TABLE 4

FOLLOW-UP AFTER 5 TO 19 MONTHS
(MAY OR JULY 1955)

Soldiers	Comparison	Suicidal
Dead	0	1 (Suicide)
Alive	63	62
Impossible to follow....	4	0
Totals	67	63
Still in service.....	22	33
Discharged	41	29
Totals	63	62
Nature of discharge:		
Honorable	26	10
Medical	4	1
Administrative (including bad conduct and dishonorable)	11	18
Totals	41	29
Civilian dependents		
Dead	0	0
Alive	0	6
Impossible to follow..	8	6
Totals	8	12

nificantly higher number of administrative discharges, *i.e.* undesirable, bad conduct, and dishonorable, among the suicidal group.¹⁰

DISCUSSION

The Data.—In a general way it may be seen that by contrast with the comparison group the suicidal group were younger, in service a shorter time, referred from confinement status less frequently, and were more frequently diagnosed as "character disorders" and "immaturity reactions." On follow-up they were more likely to have received an other-than-honorable discharge.

The two groups showed no significant differences regarding race (both predominantly Caucasian), incidence of divorce, mode of entry into service, religious preference, years of education, rank (both groups were chiefly privates), and sources of referral (chiefly M.D.'s in both groups).

¹⁰ Significance as used in this study does not connote "statistical significance" except with regard to there being a smaller number referred from confinement, and fewer honorable and more administrative discharges in the suicidal group, in which case the results do meet the test of statistical significance ($p = < .05$).

Relation to Civilian Population.—The study indicates the characteristics and results of such management in only a particular youthful age group. The problems leading to their suicidal threats or attempts are probably not the same as those in the fifth and sixth decades of life; consequently we would not recommend a similar method of management for these age groups. This point of view is supported by others. Hendin(4) found that the age of those with intermediate or maximal intent to die was 5 years higher than the average of the entire group. He also notes that the mean age at which suicide occurs is 10 years above that of the unsuccessful attempts. Schmidt, *et al.*(3) similarly classified 120 suicidal attempts as "serious" or "not serious." The average age in the "serious" group was 48; in the "not serious," 34.

No generalizations are warranted from this study to a civilian population. It is quite likely that because of the nature of military life, more people are brought to the attention of psychiatrists on an army post than would be in civilian life. In our opinion this is because in the peacetime army with which we worked, a principal goal of life was the avoidance of criticism. Consequently, responsible people were particularly vulnerable if they were to "disregard" the suicidal problem by not referring the patient immediately to a psychiatrist.

The Clinical Interview.—In clinical interviews, these patients gave no evidence of symptomatic depression or psychotic confusion, but rather of impulsiveness, recklessness, and a particular kind of exploitation, *i.e.* to make someone else more interested in taking care of them than they were in caring for themselves. Only 2 gave evidence of psychoneurotic symptoms. They did not speak of feeling guilty, hopeless, or unworthy. They showed no hypochondriacal preoccupation nor somatic delusions. There was no evidence of anorexia, insomnia nor psychomotor retardation. They gave no evidence of a desire to die or be killed; but rather that they did not "care" or at worst felt "as if they might as well be dead." At cross-sectional mental examination, some were tearful and agitated, raising the possibility that they may have been

cases of previously retarded depression who were beginning to move about more freely, with attendant increased risk of suicide. However, after obtaining the history, in no case did we find a diagnosis of depression of a psychotic or psychoneurotic nature warranted (Table 2-E).

These patients showed histories characterized by delinquency, truancy, and poor school record in general, temper tantrums, enuresis, syncopal attacks, inability to postpone gratification, poor work record, and a family history frequently described by the patient as without harmony. This is comparable to the observations reported by Teicher(6).

Emotional Blackmail.—Although we believed that what we were dealing with were essentially threats and gestures, rather than serious attempts to die, we could not ignore that each gesture carried with it the possibility of success. Batchelor(9) stresses the point that the psychopath, because he is so prone to act impulsively, may kill himself before there is time for anyone to intervene. Studies in which the seriousness of unsuccessful attempts is assessed(1, 6) generally include psychopaths in the not serious or minimal intent groups. In our nomenclature these would be the "antisocial" or "asocial character disorders."

We were impressed by the extent of personal uneasiness experienced by the commanding officers, non-commissioned officers, and medical doctors in the face of this behavior. Clearly someone had to assume responsibility for managing the patient: to take steps by enforced hospitalization to prevent him from killing himself or to take the chance that he would not do so. The feeling that "something must be done" is a well-established reflex among members of the medical profession in response to a patient's complaint, and the pressure upon the physician to "do something" when the patient presents suicide as the "chief complaint" is particularly great. (See the discussion on these points by Stengel(5).)

This urge to "do something" stems in part from the traditional concept that patients at the onset of an acute psychosis may use this as a means of asking for help by letting someone know of their extreme distress. We felt that in patients with character disorders,

the same qualitative situation exists; i.e. they are letting someone know of their distress, the "appeal character" of the attempt according to Stengel(5). This differentiation of character disorder from psychosis must be made on other grounds as described above.

Management.—The rationale for management arose from the following considerations:

1. Certain individuals are incapable of setting internal limits upon doing as they wish (an idea not original with us). Further, they probe the environment to find how far they can go in getting their wishes granted. It is necessary, therefore, for the environment to set limits for them, and it should be made clear that the limiting agent is firm but not antagonistic. The absence of antagonism is essential and therapeutic. First, it makes clear to the patient that the psychiatrist, representing the environment, has not been frightened by his behavior, and hence is not subject to intimidation or manipulation. Second, it allows the patient little opportunity to feel that he must overcome disbelief or anger by resorting to a more serious attempt.

2. Hospitalization must be avoided because it enables the patient to escape from the pressures of the specific situation which precipitated his action. Also, whenever a patient has been hospitalized, it whets his appetite to try again. Further, it was felt that in some patients their guilt about being hospitalized would require them to seek re-hospitalization as reassurance that they had been sick in the first place.

Nor are the benefits of hospitalization lost to the other men in the unit. Lowered morale and an epidemic of similar behavior among the other troops may result. Fisch(1) reports that all his patients were hospitalized as a result of their attempts. We feel that his material demonstrates one of the unfortunate consequences of such hospitalization in that he was unable to rehabilitate any who expressed an unwillingness to return to service.

3. These patients were experiencing despair as a reaction to the anxiety engendered by enforced closeness, discipline, boredom, and inequities of assignment (real or imagined); rather than as the result of guilty fear or helpless anger. Consequently, sui-

cide becomes either a lever to move the world into a more comfortable arrangement, or an act of revenge upon the army which is experienced as not having loved and cared for him properly. [See Thompson(10).]

Therapeutic Aspects.—In addition to preventing the patient from making himself more sick in the dependency-fostering setting of the hospital, this method of setting external limits constitutes a positive psychotherapeutic performance. These patients are not available for psychotherapy in the ordinary sense, because they clearly do not desire to change their patterns of behavior. Thus two goals were achieved despite the calculated risk. First, the patient, like a child, can be helped to grow by learning what is expected of him; i.e. he is given the opportunity to become responsible for his own behavior. Second, he is not permitted to blackmail others into changing unpleasant circumstances for him by threatening or attempting suicide. That is, his efforts to strike back at the parental figures who have thwarted his dependency gratification are forced into other channels. The purpose was therefore, to enlarge his range of adaptive response by allowing him to accept that this particular response was a failure.

As an incidental finding for the "others," particularly the commanding officers and medical doctors, this procedure had an educational value. It suggested to them that psychiatry has no magic. It further demonstrated the difference between taking a threat seriously and allowing oneself to be blackmailed. Finally, it reminded other physicians of the difference between individuals with depression and those with character disorders, in that the latter tend to use suicide for the purpose we have discussed.

Weaknesses of the Study.—There were three major defects in the study. First, cases seen prior to the formalization of the management were included. Second, a uniform group of exact criteria for the diagnoses were not used, nor were specific criteria provided for inclusion or exclusion regarding a particular diagnosis. Third, it was always known, either before the clinical interview or during it, that the patient had either threatened or attempted suicide. This raises the possibility that diagnoses might not have

been made at all on a number of these patients save for the psychiatrists' awareness of the suicidal problem.

Regarding the first defect, about half way through the study, the three psychiatrists agreed that what each had been doing until then seemed familiar to all and that for the rest of the study each would be saying approximately the same things to his patients. The question remains unanswered as to what the patients heard the doctors say, or for that matter, whether the things agreed upon really were said.

Regarding the second defect, the U. S. Army Standard Diagnostic Nomenclature was used and this represents a defect inherent in present-day psychiatric methodology to which we fell heir.

SUMMARY

This study describes a group of outpatients who had threatened or attempted suicide and were brought to the attention of military psychiatrists.

Data are presented comparing the characteristics of this group with a similar number of nonsuicidal patients chosen at random from the files of the same mental hygiene clinic.

The data indicate that the suicidal group were younger, had less time in service, and were more frequently diagnosed as "character disorders" and "immaturity reactions" than the comparison group. Within the suicidal group itself, the frequency of attempts was higher among enlistees (1 per 3.5) than among draftees (1 per 5.7).

Each patient was handled in a like manner, and none was hospitalized nor seen a second time.

A follow-up of 5 to 19 months indicated a low incidence of suicides among the pa-

NO OBSERVED DIFFERENCES BETWEEN SUICIDAL and COMPARISON GROUPS

RACE
MARITAL STATUS
RELIGIOUS PREFERENCE
YEARS OF EDUCATION
MODE OF ENTRY INTO SERVICE
MILITARY RANK

FIG. 1

OBSERVED DIFFERENCES BETWEEN SUICIDAL and COMPARISON GROUPS

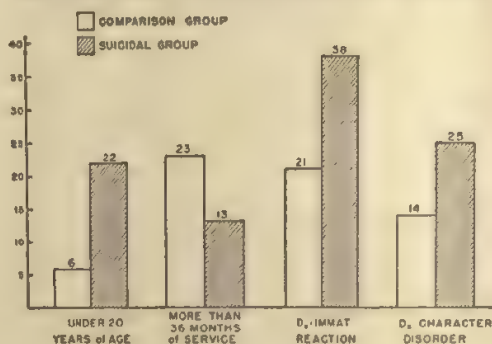


FIG. 2

tients managed in this way (1 in 75); also a significantly higher number of administrative discharges, and a significantly lower number of honorable discharges among the suicidal group.

Comparison with civilian population, characteristics of the clinical interviews, rationale of management, therapeutic aspects, weaknesses of the study, and the nature of emotional blackmail are discussed.

CONCLUSIONS

1. Suicide problems in service, because of the special characteristics of military life in interaction with specific problems of the patients, are significantly different from those in civilian life. Some of these characteristics and problems are amenable to study and are described.

2. The low incidence of actual suicide on follow-up suggests that the method of man-

OBSERVED DIFFERENCES BETWEEN SUICIDAL and COMPARISON GROUPS

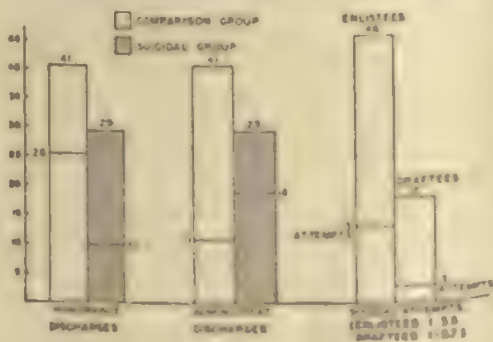


FIG. 3

agement described was successful. However, a comparative study on a similar group, using a different method of management, would be required to validate this point.

BIBLIOGRAPHY

1. Fisch, M. *Am. J. Psychiat.*, **111**:33, July 1954.
2. Arief, A. J., McCulloch, R., and Rotman, D. *Dis. Nerv. Sys.*, **9**:174, June 1948.
3. Schmidt, E. H., O'Neal, P., and Robins, E. *J.A.M.A.*, **155**:549, June 5, 1954.
4. Hendin, H. *Psychiat. Quart.*, **24**:39, Jan. 1950.
5. Stengel, E. *Proc. Roy. Soc. Med.*, **45**:613, Sept. 1952.
6. Teicher, J. D. *Jour. Nerv. Ment. Dis.*, **105**:283, Mar. 1947.
7. Laufer, L., and Casriel, D. *U. S. Armed Forces Med. J.*, **3**:1825, Nov. 1952.
8. Raines, G. N., and Thompson, S. V. *Digest of Neurol. & Psychiat.*, **18**:97, Feb. 1950.
9. Batchelor, I. R. C. B. M. J., **1**:1342, June 12, 1954.
10. Thompson Clara. *Psychoanalysis. Evolution and Development*, p. 52 ff. New York: Hermitage House Inc., 1950.
11. Oliven, J. F. N. *Eng. J. Med.*, **245**:488, Sept. 27, 1951.

DISCUSSION

COL. ALBERT J. GLASS (Washington, D. C.).—From my experience the authors of this paper are correct in stating that suicidal gestures or attempts by military personnel create marked uneasiness in those who occupy positions of command or medical responsibility. It is probable that the restrictions of military existence produce a greater frequency of acts and threats of self-destruction in the young military population than a comparable age group in civilian life, although I know of no statistical data that will prove or disprove this assumption. At any rate, suicidal gestures are a common cause of referral to the military psychiatrist. Under these circumstances the psychiatrist is eagerly accepted as the proper person to solve the dilemma of whether to react against the intuitively understood hostile behavior of the suicidal subject with equal aggressiveness, or to yield to the threats of suicide by removing the individual from the situation either by hospitalization, reassignment, or some other environmental manipulation. Faced with this responsibility the military psychiatrist also suffers from anxiety since he has no certain method of identifying the few whose suicidal at-

tempts are an ominous portent of later more successful self-destructive efforts from the many whose suicidal gestures may be safely disregarded. Too often the military psychiatrist finds it more comfortable to allay his own anxiety and hospitalize all such referrals. As indicated in this paper, hospitalization unfavorably influences the morale of the group and facilitates the suicide subject to fixate neurotic and immature patterns of adjustment.

The unique value of this presentation lies in its account of a direct and operational approach to this problem. Methods in the management set forth herein can be duplicated by others. The experience of the authors indicates that impressive results are obtained by a firm but sympathetic management which is based upon (1) clarification of the situational conflict; (2) placing of the responsibility for the self upon the subject; and (3) the blocking of secondary gain.

It is perhaps not surprising that this technique is similar to methods employed in the treatment of combat psychiatric casualties. Since World War II, military psychiatrists who work with psychological problems that are engendered primarily by external stress conditions appear to arrive independently at similar conclusions; namely, (1) that abnormal behavior or symptoms are best understood in terms of adaptation to the present, rather than psychopathology caused by conflicts of the past; (2) that individuals must be aided to overcome and master anger and anxiety due to realistic external conditions and social obligations; (3) medical evacuation and hospitalization only confirm and continue helpless and evasive patterns of behavior.

Undoubtedly there are risks in any method which insists upon further efforts by the individual to continue functioning in what is for him a distressing and painful existence. Some failures are inevitable as demonstrated by repeated suicidal attempts, or due to errors in diagnosis such as the one death reported in this paper. However, even the most elaborate and time-consuming techniques of observation and diagnosis are not infallible.

The authors correctly point out that their technique is not directly applicable to similar phenomena in a civilian setting or in an older age group or in a mental hospital population, all of which are much less homogeneous in age and psychopathology than the subjects of this study.

I congratulate these authors for a splendid contribution in an area of military psychiatry in which there has been much uncertainty and doubt. Their work demonstrates that practical research can be carried out in the "field" by making use of the clinical material available. Because an operational and duplicable approach was employed, information obtained by this experience can be repeated and, if confirmed, will add to our knowledge and therapeutic armamentarium.

THE ROLE OF THE PSYCHIATRIST IN TEACHING COMPREHENSIVE MEDICAL CARE¹

DONALD C. GREAVES, M. D.²

Comprehensive medical care has been defined as a science which includes not only the treatment and cure of sick human beings, but the prevention of disease and the preservation of health. It is essentially an effort to humanize medicine, and to train the physician as a comprehensive human biologist with emphasis shifted from the training of more physicians to the training of better ones. The physician so trained should begin his professional life with the facts and technical skills necessary to make diagnoses and institute treatment, as well as the ability to recognize the importance of social, cultural, and emotional factors on genesis, prognosis, and therapy of disease. Such training is the acknowledged goal of comprehensive medical care.

In the last decade, medical educators have been increasingly concerned as to whether their students were adequately prepared for the practice of this kind of medicine. Such concern did not spring unprovoked from faculty meetings, but, like most of the advances in medical sciences, resulted directly from the unfulfilled needs of patients. There was a growing awareness of the importance of emotional factors in clinical medicine. The practicing physician, they were told, finds that a large number of his patients have illnesses which are either primarily emotional or strongly influenced by emotional and social factors. In their own teaching centers they saw that treatment frequently suffered from the increasing complexity of modern scientific medicine. They saw treatment become broken into a large number of specialty clinics with much duplication and waste. They saw contact broken between the patient and his student physician. There was little opportunity or time for the physicians or students to get to know patients as human

beings with human problems. At the same time, they knew that unsatisfactory patient care was most frequently the result of an inadequate teaching program rather than vice versa. Thus, there was a movement toward re-evaluation and reorganization of curricula. For example, a sweeping reorganization of the fourth year curriculum was instituted on a full scale at the University of Oklahoma School of Medicine and University Hospitals as early as July 1952(1, 2). The Oklahoma program demonstrated the value of this method ("The Longitudinal Curriculum"), and it has since been adopted at several medical schools.

After a year's preliminary study, the New York Hospital-Cornell Medical Center established the "Comprehensive Care and Training Program" for senior medical students beginning with the academic year 1952-53(3). This plan was to provide the student with 5½ months of continuous service in one general medical clinic to which were attached consultants in all the medical specialties. The planning committee felt that in addition to this, it was imperative that the ambulant patient selected for care in this clinic should have one physician responsible for his total management and that on each of his hospital visits, the patient should come to the same familiar place and see the same familiar and friendly faces. One student was to act as family physician throughout his period of service, calling in consulting help from medical specialties where indicated, extending his services to other family members when needed, and bringing hospital services into the home when it was advantageous. The student's training was to be centered around the care of the individual patient, but would also include scheduled conferences, lectures, and seminars, as well as sufficient free time for house calls and other unplanned responsibilities. Preceptors were assigned to individual groups of 10 or 11 students for seminars which were used for case discussions or didactic teaching.

¹ Read at the 112th annual meeting of The American Psychiatric Association, Chicago, Ill., April 30-May 4, 1956.

² Associate professor, department of psychiatry, University of Oklahoma School of Medicine and University Hospitals, Oklahoma City, Okla.

There were a number of new experiences in this program. Probably the most important was the continuity of contact between the patient and the physician for half a year. It was no longer possible for the student, after examining his patient and attaching the appropriate labels, to refer him to another clinic for treatment, and another student's work-up. The student had to plan his medical management and was forced, sometimes just by repeated contact, into an awareness of the patient's social and emotional needs. He was no longer oriented to disease, but to sick persons, and he began to know the anxieties that ordinarily occur only after he starts his own practice; and the practice of medicine is beset with anxieties.

In this situation the student began to develop attitudes which relieved his anxieties, but were against his patients' better interests. This was partly because he so commonly felt fraudulent in his masquerade as a "real doctor." The student was afraid to say, "I don't know" or to refer questions to others. He felt that the patient was being of more help to him than he to his patient. In defense he sometimes emphasized the technical aspects of his skill, becoming insensitive to or denying the existence of his patients' feelings; he became arbitrary to cover his insecurity; when bewildered by the attitude of the dependent and anxious patient, he was tempted to play the role the patient assigned to him, *i.e.*, the omnipotent father, the unquestioned authority, or the incompetent fumbler. Because of his own ambivalent attitudes toward the role of emotional factors, the conscientious student sometimes put his patient through numerous and exhaustive physical and laboratory studies, only adding to the patient's neurotic body concern. With patients who were hostile, suspicious or questioning, the student felt especially threatened. Not recognizing the psychopathology and defensive maneuvers, he saw but the confirmation of many of his own ideas about himself, his skills, and his status in the clinic.

With 45 students assigned to the clinic at a time, the course became in essence a laboratory in patient management where students began to ask more and more frequently for psychiatric consultation and supervision.

Originally a part-time psychiatrist was

assigned to the Comprehensive Care Clinic to act as consultant and to take part in conferences when his time permitted. Because of the unique nature of this learning experience and its impact on the medical students, it was necessary to increase the amount of psychiatric consultation.

When, in July 1954, full-time psychiatric coverage to the clinic was arranged, it became possible to re-evaluate the needs and goals of the psychiatric teaching program and to plan a curriculum that would best reach these objectives. It is the purpose of this paper to tell the author's experience as psychiatric consultant to the Comprehensive Medical Care Program, and to define further the goals of such psychiatric teaching.

CONTENT AND METHOD OF TEACHING

Since there are psychiatric implications in the care of every patient, the program offered a unique opportunity to the psychiatrist in attendance. He had ideal teaching material: outpatients with a variety of diseases and disorders; patients in whom neurotic problems were more frequent than "psychoses"; patients in whom psychophysiological problems were common; patients who were for most purposes considered to be psychologically "normal"; and patients who were reacting emotionally to physical illness.

The traditional role of the consultant or attending physician in an outpatient clinic is to hear a presentation of the student's history and examination, see the patient briefly, and then discuss treatment. At the beginning of the program, the role assigned to the psychiatrist followed this precedent, and he was called only when the student or the regular doctor attending felt that a psychiatric opinion would be helpful. It was soon obvious, however, that such a plan was insufficient, for a large number of students did not call upon the psychiatrist, while some students became too dependent on him. Although some students were asking for supervision and guidance in their psychotherapeutic relationships with patients, others were avoiding consultation even when it was evident that the patient had an emotional problem. In the purely consultative role, the psychiatrist was not reaching all students. Provisions were made, therefore, to extend

the psychiatric teaching in 2 major ways: by weekly seminars with each group of 11 students; and by making house calls with those students who had patients on home care. These 2 methods were sufficiently rewarding to justify a more detailed report.

SEMINARS

The weekly seminars were informal sessions in which students could bring up current problems in patient management for group discussions. It was soon apparent that the psychiatrist could not depend on the student's ability to carry into general medical work the knowledge and techniques learned in the department of psychiatry during the previous 3 years. Indeed, many students who had performed well in the psychiatric outpatient department seemed unable to do as well in the medical clinic. It was as if they felt comfortable in this sphere only when the patient took the initiative by admitting psychiatric illness. Thus, it was necessary to review briefly previous instruction in basic psychopathology, dynamic structure and function of personality, reaction types, diagnostic entities, and techniques of history taking and psychological examination.

Special emphasis was placed on developing skills in interviewing, and not only eliciting but understanding the primarily vocal communications of patients. Various techniques were tried, such as didactic discussions, interviewing patients before the group and behind a one-way screen, and listening to recorded interviews, combined in each case with group discussion. Students were encouraged to give their individual attention to the patient's story in a noninterrogative way, and without the use of constricting forms or voluminous notes. The students required reassurance that it was neither possible nor desirable to get all the information at the first contact with the patient. This required a revision in many of their ideas of history-taking.

The concept of the psychological examination or mental state was difficult to get across because of the common idea that this was done only with "psychiatric" patients; yet by watching an interview and discussing what they had seen, the students were surprised at the relatively complete and informa-

tive sets of observations that were possible. Many students verbalized their fear of inquiring about suicidal thoughts in the depressed patient for fear of "putting ideas in his mind." Others hesitated to delve into the sexual history because they might get "too deeply" into an unfamiliar area in which they were anxious and insecure. They had a hard time making purely objective and descriptive observations of psychological phenomena. However, by precept and discussion they were able to learn some of the techniques for inquiring into sensitive areas with a degree of objectivity.

There was one approach to the seminars which stimulated interest and participation. This was to present the material as an exercise in problem solving. The essential data were presented to the student in mimeographed form several days prior to the seminar. One such exercise was the following:

You are consulted by a 27-year-old, unmarried, successful attorney who complains of being run-down. He feels he should have some vitamins or a tonic to build him up. You begin to wonder what he means and what he wants built up, for he states that he has felt poorly for only 5 or 6 weeks, and that he has no other symptoms except fatigue and difficulty falling asleep. Past medical history, physical and laboratory examinations are singularly unrevealing. At your inquiry he tells of his engagement to a young woman with whom he is very much in love. As you settle back, preparing to hear the real reason why this patient consulted you, he tells at length of his relationship with his fiancée, extolling her virtues. He talks of his ambitions, both socially and professionally, and how much he is looking forward to their marriage in 2 months. In response to your matter-of-fact questions about his sexual life, he breaks down in tears and shamefacedly confesses that he has attempted intercourse with his fiancée on 2 occasions, but that both times, in spite of strong desire, he was unable to have an erection. In this matter he had experienced tremendous anxiety and guilt. He says, "Doctor, telling you this is the most difficult thing I've ever done. I'm so ashamed. I don't know what you'll think of me."

You ask him about his past sexual experiences. He then settles down to relate his story. His parents, both now dead, were very puritanical, and he had no home instruction in sexual matters because this was taboo. His mother had made him feel that womanhood was sacred, and that sexuality was disgusting. After he had been caught masturbating at age 14, his father had upbraided him, and then warned him that no gentleman ever taken advantage of a woman. He had felt guilty about masturbation after this. In college he had revolted

and had a number of sexual affairs with women of inferior social and educational status. He achieved full physical satisfaction, but always had some guilt and anxiety that he would be found out.

When he met Mary these sexual relationships ceased. He wondered if he would enjoy sexual relationships with her as he had with others. On the occasion of his attempted intimacy with Mary, some 6 weeks ago, he felt like a seducer; Mary was somehow too good for this sort of thing. He began to worry about his own manliness and his fitness for marriage. He felt he might be diseased. He realized he was naive in many ways about sex.

With this confession and increasing confidence, he had many questions: "What is wrong with me physically that I can't have an erection?" "Is it wrong, doctor, for us to have premarital intercourse?" "Should I worry about pregnancy—can you help me on that score?" "Mary seems less anxious and guilty than I, and she seems to be less inhibited. Is that right for a woman?" "I'm also upset, although I don't know why, because she wants the lights on. Besides she asks too many questions, and I'm embarrassed."

Discussion.—Can you answer these questions? How? What is your diagnosis? What is the trouble with your patient? How do you formulate the dynamics involved? What of his relationship to you? What will you do now?

With case material such as this, discussions were enthusiastic and even the more reluctant members of the seminar group could be expected to participate. It was nearly always possible to relate the hypothetical case material to the actual patients for whom the students were responsible, but whose problems they had never discussed spontaneously. Printed case histories designed to raise certain recurrent problems in medical care were brought forth at the request of the students and ranged widely: how to organize time with patients; how to keep accurate and adequate records; how to refer a patient to a psychiatrist; the limits of the physician's responsibility; moral, ethical, legal, and religious questions.

The special advantage of a printed case history offsets one of the major problems in undergraduate psychiatric education, namely, the nature of patient material. In many medical centers students have most, if not all of their patient contacts with the indigent, poorly educated person, eking out a marginal existence in slum areas. The lives of the student's patients are so foreign to his own, and are frequently so overwhelming as to hamper any real understanding between them. It is equally true that when in prac-

tice, he will be dealing with such patients only during the time he devotes to teaching. Albeit artificial, the printed case material can bring to the student, problems much more like those he expects to meet after graduation.

HOME CARE

The home care program is essentially an extension of hospital services into the home environment. It provides an excellent opportunity to help the students understand not only the socio-economic factors which might be operative, but the dynamic interrelationships among the members of a family. One senior student requested help in the management of a 72-year-old Italian immigrant who was dying of widespread metastases from a carcinoma of the prostate. After a period of supportive and symptomatic treatment in the hospital, the patient was discharged to the home care program. It was at the request of his wife, herself a cardiac invalid, and his oldest daughter that he was returned to his home. Soon the daughter, a 35-year-old, single stenographer, approached the student physician on several occasions with complaints about the difficulty in managing the father at home; yet when questioned, she was insistent that he remain there. She said that her father had undergone a decided personality change, and was now demanding, petulant, irritable, and hostile.

Student and psychiatrist visited the home together, where examination of the patient confirmed the history given by the daughter. There was no evidence of underlying organic brain damage, and the behavioral difficulties were felt to be somehow related to the interfamilial relationships. A relatively brief interview with the daughter revealed a significant area of conflict. The father and mother had come to the United States from Italy in their early twenties. They married in this country, and immediately began raising a family. There were 5 children, all of whom were married and away from home except this daughter. She revealed that, pursuant to their cultural custom, she, the oldest child, was selected at birth to remain single and in the parental home to care for the parents during their old age. She was

subsequently taught to do housework and sent to secretarial school, while her siblings engaged in an active social life preparing for marriage. She had accepted her role passively and without question, and was now fulfilling her filial obligation, although not without considerable underlying hostility and guilt, only part of which she was aware. The daughter returned to the hospital on 4 or 5 occasions to see the student in supervised psychotherapeutic interviews, during which time her father progressively improved and became much less of a management problem.

No amount of didactic instruction in the importance of social and cultural factors could have been as important as this one experience for the student.

SUMMARY AND CONCLUSIONS

The concept of a Comprehensive Care Clinic, to which consultants in the medical specialties are attached, is relatively new. The part of such programs that is unique, and has the greatest implication for medical education in general and psychiatric education in particular, is the functioning of the student as a family physician for a period (22½ weeks in the Cornell program, 32 weeks in the Oklahoma program). Such an experience probably parallels the practice of medicine as nearly as is possible during medical school. The importance of psychiatric participation in such a program is obvious and is firmly established.

Since it is so firmly established, there is no need for the psychiatrist to be apologetic about his contribution, and there is no excuse for his allowing it to become a student elective. The medical educator, regardless of his particular field of interest, has the obligation to train physicians in the best way possible. Part of this obligation is to make his subject matter palatable and attractive, but an equally important part is to see that his teaching

reaches and is assimilated by all students under his charge, whether or not the individual student expects to find the subject matter interesting or worthwhile. Possibly there is a place in undergraduate psychiatric education for group psychotherapeutic experiences which are designed to break down the student's resistances, but it can in no way replace organized instruction for which students are held responsible.

It is too early to evaluate completely comprehensive care and training programs and the role such programs should play in the training of physicians. The conclusion of most of those who have participated in them is that they are training better physicians, and as a direct result of this training, leading to better and more complete medical care of patients. Where these experiences are used as a guide to future programs in other schools, it should be emphasized that full-time psychiatric participation in the planning and execution is absolutely necessary in achieving the desired goals.

The psychiatrist can function in a number of specific ways within the clinic setting. He can be available as a consultant for the individual student and his patient, and this will be an important part of his activities. In addition, the curriculum should be so organized that the psychiatrist has time and opportunity to reach all the students. Regularly scheduled seminars with small groups of students, and active participation in the home care program, in my experience are 2 of the most successful means of achieving this goal.

BIBLIOGRAPHY

1. Colmore, J. P. *South. Med. J.*, 47: 897, Sept. 1954.
2. Colmore, J. P., and Wolf, S. *J.A.M.A.*, 156: 830, Oct. 30, 1954.
3. Reader, G. J. *J. Med. Education*, 28: 7, July 1953.

BEHAVIOR SYMPTOMS IN CHILDREN AND DEGREE OF SICKNESS^{1, 2}

JOHN C. GLIDEWELL, PH.D., IVAN N. MENSCH, PH.D., AND
MARGARET C.-L. GILDEA, M.D.³

In planning a comprehensive program in community mental health, the question of defining services suitable to treat certain kinds of mental illnesses in children becomes of paramount importance. Both adequacy and economy of treatment should be constantly kept in mind as checks on the program and its budget, and the constant feedback of these checks should guide the development of the various facilities. For these reasons there is need for reliable screening and a case finding method which has been adequately tested, and which could be useful in making preliminary judgments of the level of adjustment of school children. If this judgment does nothing more than select children who need further study, much will be gained.

Community mental health services may be divided into 4 types, each designed to serve children showing a different degree of disturbance: (1) An educational service to help parents deal with simple maladjustments of their children. These maladjustments show themselves in symptoms which are transient and appear in otherwise well-adjusted children in response to new problems or changes in the environment. (2) A school-centered service which offers help to parents whose children have maladjustments with more fixed and less clearly reactive symptoms, which, however, are not so severe as to disrupt either school attendance or family life. (3) The child guidance clinic which helps the parent and child with problems in which symptoms are fixed and repeated, and severe enough to threaten or

break up school attendance. The family, however, remains intact. (4) Residential treatment is required for children showing problems that lead not only to school disruption, but also to the breakup of the home. These children cannot be adequately treated in school or clinic, but must go to a living-in center which offers 24-hour care (3).

Whether symptoms alone can be used as a screening tool depends on whether they can be shown to be related to the degree of clinical sickness in children. This subject has been much discussed among child psychiatrists for many years. Some child psychiatrists feel that it is dangerous to use presence or absence of symptoms as an indication of whether the child is sick or well. Gardner (5) divides children's problems into two categories, i.e. those requiring short-term therapy, a group which may be equated with Groups 1 and 2, and a group requiring long-term treatment, roughly equal to Groups 3 and 4. Of the former group he says that therapy aimed at relieving the symptom "will probably allow the child an extremely good chance of continuing thereafter a normal and orderly personality development." Of the latter group he warns against using absence or disappearance of symptoms as an indication for stopping treatment, or that the child can be considered well. He says, "removal of the presenting symptom may delay but not prevent the child from developing a more serious disability later in childhood or adult life." Gardner appears to doubt that symptoms themselves can be used to discriminate between sick or well children, or those with different degrees of emotional maladjustment.

On the other hand Levy (7) believes that symptoms can be used to determine sickness or health in children. He says:

One of the findings that resulted from a series of follow-up studies starting at the Institute of Child Guidance in New York and utilizing material from about a dozen child guidance clinics . . . was that the highest correlation with general personality growth was the disappearance of the presenting symptoms. That would be a very important finding

¹ Read at the 112th annual meeting of The American Psychiatric Association, Chicago, Ill., April 30-May 4, 1956.

² This is a report on part of a Mental Health Research Program of the St. Louis County Health Department, supported by research grant M-592 from the National Institute of Mental Health of the National Institutes of Health, United States Public Health Service.

³ From the Washington University School of Medicine and St. Louis County Health Department. Grateful acknowledgement for their contribution is made to Dr. H. R. Domke, Mr. A. D. Buchmueller, Miss E. T. Ferrel and Mrs. Emily Schwarz.

if substantiated—that when the so-called symptoms have been removed, follow-up studies reveal that concurrently beneficial inner changes have taken place.

Witmer (10) also finds that disappearance of symptoms in children treated in a child guidance clinic correlates higher with clinical improvement than any other trait. Kanner (6) says, "the clearing up, or persistence, of the difficulties complained of may frequently, though not always, be used as a measure of the reasonableness and adequacy of the handling of the maladjustment." He lays much emphasis on the "complaint," i.e. the mother's statement of symptoms, as a critical factor in determining treatment.

In 1954, Eitzman (4) found, in an intensive follow-up study of 12 children treated in the St. Louis County Child Guidance Clinic, that mothers reported markedly fewer symptoms and reduced frequency after treatment than they reported at the time the child was referred. Specifically, at the time of referral, the 12 mothers reported a total of 86 current symptoms of 42 different types (mean=7.2). After treatment, these same mothers reported a total of only 40 symptoms (mean=3.3) and only 24 different types.

Although not specifically utilizing mothers' reports of symptoms, a number of studies give attention to the screening of school children for evidence of disturbance. Anderson of the Institute of Child Welfare, University of Minnesota (1, 2) is doing excellent work in screening methods developing a number of instruments which give considerable promise in differentiating children of varying degrees of "adjustment." These instruments, according to Anderson, "were designed for children with enough skill in reading to be able to comprehend the material and enough skill in writing to write something on an open-end sentence test" (2). One advantage of using the mother's report of symptoms is that it makes no demand on the reading or writing skill of the child, and can be used at any age level.

The present study was undertaken to determine whether symptoms in children, as reported by their mothers, could be used to discriminate between those in varying levels of emotional adjustment as independently determined by other means and other observers. The symptoms were compiled in an in-

ventory which recorded not only the type of complaint, but also its severity, frequency and duration.

SAMPLES

School Sample.—This sample consisted of 91 white, public school children in 3 third grade classrooms, 1 in each of 3 schools in St. Louis County. The third grade was selected as showing relatively few transient symptoms of disturbances. Most third grade children have completed the initial behavioral adjustments to the move from home to school. At the same time they have not yet begun to make the transition to preadolescence.

Clinic Sample.—Because the school sample was nearly a typical one, normal, it contained only a few children sufficiently disturbed to require clinical treatment ($n=6$). Because it was so small any result might be due to some special peculiarity of the sample. To have a larger number of disturbed children, an additional 35 were drawn from children referred to the St. Louis County Child Guidance Clinic.

CRITERION GROUPS

In order to test the relationship between a mother's report of symptoms and the sickness of the child, an independent, valid assessment of degree of sickness was required. The following sections describe the method of assessing the degree of sickness.

The Assessment.—All the children in the school sample attended schools in which a psychiatric social worker had been employed for 3 years. During this time the children had been under observation of teacher and worker. In those cases in which they observed problem behavior in preliminary screening, more comprehensive diagnostic procedures were used. Where diagnostic conferences between the worker and the school personnel indicated a possibility of disturbance, the child was referred to the St. Louis County Child Guidance Clinic for diagnostic study. As a result of this screening and diagnostic procedure, it was possible to make an independent professional decision. The school sample included, as would be expected, a large number of children with

no significant mental health problems (Group 1). Teachers were asked to separate these children in 2 groups: 1a, "well adjusted," and 1b, "no significant problems." The result of this additional refinement was a gradation of 4 degrees of disturbance, not including the most severe ones requiring residential treatment (Group 4), of whom none was found in this sample.

Four Degrees of Disturbance.—The definition of the degrees of disturbance follow closely those employed in an early study by Ullman(8). (1a) Well adjusted: A child who is well adjusted in his relationships with others and in his accomplishments. (1b) No significant problems: A happy child who gets along well and accomplishes reasonably well the things that go with his age and level of development. (2) Subclinically disturbed: A child who is not so happy as he might be, with moderate difficulties in adjustment to whom growing up represents a struggle. (3) Disturbed: A child who has, or is likely to have, serious problems of adjustment and needs clinical help.

Children designated as disturbed have been so diagnosed by a psychiatric team in the Child Guidance Clinic. Those designated subclinically disturbed have been so diagnosed after at least a brief diagnostic study at school or in the clinic. Those designated as having no significant problems have shown no evidence of disturbance after 3 years' observation by the worker-teacher team. Those designated as well adjusted were so appraised on the basis of the teacher's observation.

All children in the sample of 35 drawn from clinic records had been given a diagnostic study in the clinic, and the determination of the degree of disturbance was taken from the results of these studies.

Assessment Results.—By this method of assessment, the school sample of 91 included 21 well-adjusted children (Group 1a), 39 with no significant problems (Group 1b), 25 subclinically disturbed (Group 2), and 6 disturbed (Group 3). The clinic sample of 35 children included 2 with no significant problems, 14 subclinically disturbed, and 19 disturbed.

THE INTERVIEW

The mother's report of the symptoms presented by the child was obtained by private

interview in the home. The interview is used as part of a more extensive research and the symptom inventory is only one part. The mother is asked a series of questions about the demographic characteristics of the family and the family background. Next she is asked questions which constitute the symptom inventory. "Does Johnny have any trouble (sleeping, eating, getting along with other children, etc.)?" Affirmative responses are followed by probes into (1) the specific difficulty, (2) its duration, (3) frequency, (4) severity. This kind of questioning is continued through other areas of difficulty. 17 in all: digestion, getting along with grown-ups, unusual fears, nervousness, thumb sucking, overactivity, sex, daydreaming, temper tantrums, crying, lying, stealing, destructiveness, rejection of school.

FINDINGS

The data obtained have been treated by a variety of methods, taking into account the contribution of the variations in sex, age, social class, and schools from which the samples were drawn. In all treatments the findings show a stable and clear-cut positive relationship between the degree of sickness and the number, frequency, duration, and severity of the symptoms reported by the mother. The more symptoms so reported, the greater is the likelihood that the child will be found to be disturbed on clinical examination.

The findings are summarized in Fig. 1, which shows the regression line representing the relationship between the ratings of the degree of disturbance and the mean number of symptoms reported by the mother, in a sample of 126 children. As indicated in Fig. 1, mothers of children without disturbance reported, on the average, about 2 symptoms;

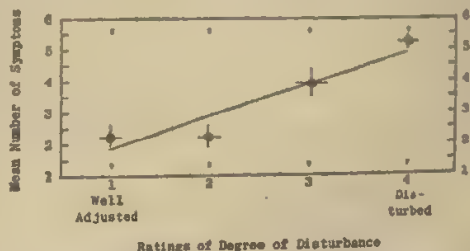


FIG. 1.—Regression of mean number of symptoms reported on degree of disturbance in the child.

mothers of subclinically disturbed children reported about 4 symptoms; and mothers of disturbed children, 6 symptoms.

RELATIONSHIP BETWEEN THE NUMBER OF SYMPTOMS REPORTED AND DEGREE OF SICKNESS

The foregoing summary of findings indicates the general nature of the relationship between the degree of sickness and the number of symptoms reported by the mother. The detailed findings permit elaboration on this relationship, first for the school sample of 91 children, and secondly for the clinic sample of 35 children.

The School Sample.—While the findings show a significant difference among the means of the number of symptoms reported by mothers in the 4 degrees of disturbance, it is important to note the range of symptoms reported by each of the 4 criterion groups. These findings are summarized in Table 1, and shown graphically in Figs. 2 through 5.

The curves in these Figures indicate the details of the relationship. These details are perhaps best summarized by observing that the peak of the curve moves consistently to the right through the 4 groups, from the well-adjusted to the disturbed group. This again shows that the more disturbed the child the more symptoms his mother reports.

These curves, along with the data in Table

TABLE 1

NUMBER OF SYMPTOMS REPORTED BY MOTHERS
(School sample of 91 children)

Degree of sickness	N	Number of symptoms reported (Percentage reporting)				
		0-1	2-3	4-6	7+	Total
		Boys				
1a. Well-adjusted	04	75	25	00	00	100
1b. No known problems.	24	42	25	29	04	100
2. Subclinically dis-						
turbed	14	00	36	64	00	100
3. Disturbed	05	00	40	00	60	100
	—	—	—	—	—	—
Total boys	47	28	30	34	08	100
					</	

1, also show the extent of variation in the symptoms presented by each of the 4 groups. There were, for example, 5 well-adjusted girls (29%) who showed 4 to 6 symptoms, or as many as the average for subclinically disturbed girls. Similarly, there were 2 disturbed boys who showed only 2 or 3 symptoms—too few to reflect the degree of dis-

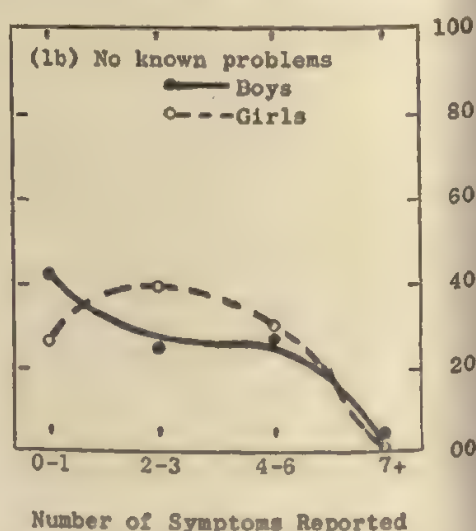
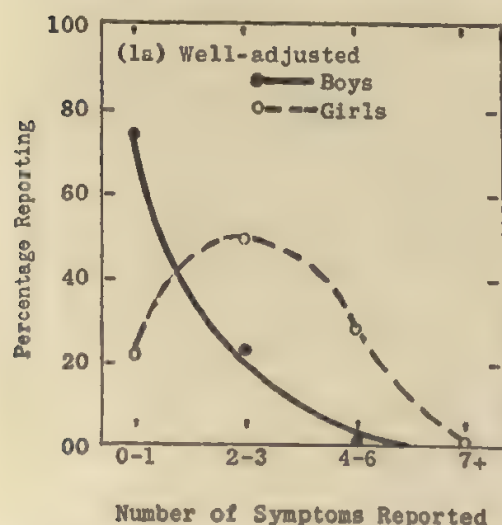


FIG. 2.—Range of symptoms reported by mothers of well-adjusted children.

FIG. 3.—Range of symptoms reported by mothers of children without known problems.

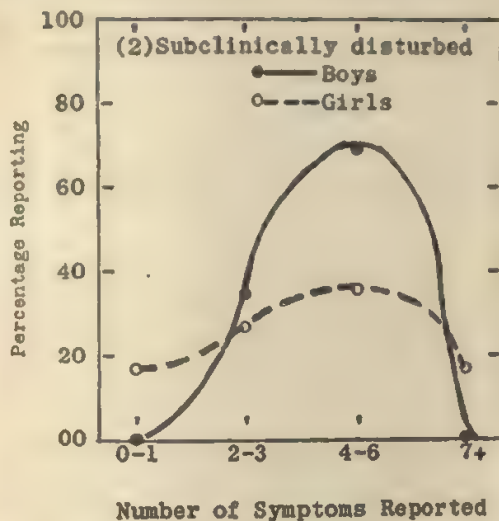


FIG. 4.—Range of symptoms reported by mothers of subclinically disturbed children.

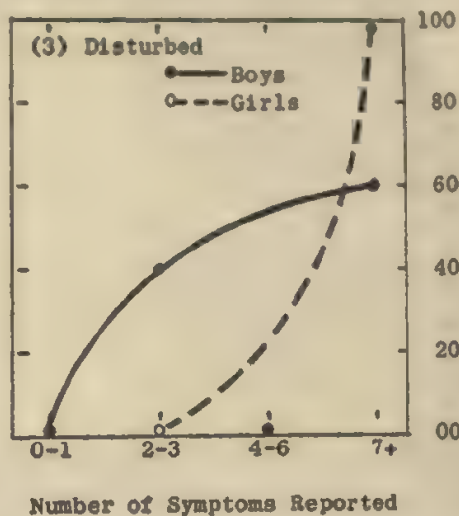


FIG. 5.—Range of symptoms reported by mothers of disturbed children.

turbance actually found. The findings for these 5 girls and 2 boys reflect the error in this screening device. The effects of the error are discussed in detail in following sections of this paper.

The Clinic Sample.—Because the school sample included only a few disturbed children (25 subclinically disturbed, 6 disturbed), an additional 35 children were drawn from the files of the St. Louis County Child Guidance Clinic. Of these, 2 were found, on clinical examination, to have no significant problems. In both cases the mother reported independently only 1 or 2 symptoms on the inventory. There were 14 children found to have subclinical disturbances, and the mothers of all but 2 reported 4 or more symptoms. There were 19 severely disturbed, and all but one of the mothers reported 4 or more symptoms. These findings show that the results obtained from the school sample were confirmed, and with reduced error.

Extent of Correlation.—The relationship between the degree of sickness in the child and the number of symptoms reported by the mother can be represented by a correlation coefficient of 0.50, shown graphically by the regression line in Fig. 1.

Reliability.—These findings show a positive and reliable relationship between the number of symptoms reported by a third-

grade child's mother and the degree of sickness found in the child on clinical examination. The prediction of the degree of sickness from the mother's report has been shown to have some error (10 deviant findings out of 126), but all the differences among mean number of symptoms reported for children showing 4 degrees of disturbance were statistically significant at the 0.01 level of confidence (see Tables 2 and 3).

CONTRIBUTION OF THE FREQUENCY DURATION, AND SEVERITY OF THE SYMPTOMS REPORTED

The findings discussed have been confined to the number of symptoms reported

TABLE 2
MEAN NUMBER OF SYMPTOMS FOR BOYS AND GIRLS WITH FOUR DEGREES OF DISTURBANCE

Degree of disturbance	School sample of 91			School plus clinic sample of 126		
	Boys	Girls	Total	Boys	Girls	Total
1a. Well-adjusted	1.5	2.6	2.3	1.5	2.6	2.3
1b. Without known problems	2.2	2.5	2.3	2.2	2.4	2.2
2. Subclinically disturbed	4.0	3.3	3.6	4.1	3.5	3.9
3. Disturbed	5.3	7.4	5.6	5.1	6.4	5.6
Grand means	2.9	2.8	2.8	3.3	3.2	3.3

TABLE 3

ANALYSIS OF VARIANCE FOR TOTAL NUMBER OF SYMPTOMS REPORTED

(Log transformation; corrected for disproportionality)

Source of variance	De- grees of free- dom	Sum of squares	Mean squares	F	p
Sample of 91					
Degree of disturbance .	3	0.59946	0.19981	5.63	.01
Sex	1	0.00941	0.00941	—	ns*
Interaction ..	3	0.08778	0.02920	—	ns
Residual	83	2.95133	0.03550	—	—
Sample of 126					
Degree of disturbance .	3	1.46205	0.48735	13.908	.001
Sex	1	0.01258	0.12580	3.590	ns
Interaction ...	3	0.10397	0.03465	—	—
Residual	118	4.13573	0.03504	—	—

* Not significant.

by the mother without regard to her report of their frequency, duration, or severity. The data were treated so that a score was derived for each symptom reported. The score was a composite of 3 ratings by the mother: one for frequency, one for duration, and one for the severity of the symptom. The scores for each of the 17 symptoms were then added to yield a total for the entire symptom inventory. This total took account of the frequency, duration, and severity of the symptoms as reported by the mother. These totals were then given the same treatment as the number of symptoms reported, and the results were compared to determine if there was an increase in the sensitivity of the symptom inventory as an index of disturbance.

When the frequency, duration and severity of the symptoms reported by the mother were thus taken into account, the resulting symptom inventory scores provided a more sensitive differentiation of disturbance in third-grade children than did the simple count of the number of symptoms.

Differentiating Power of Individual Symptom Areas.—It was found that each of the 17 symptoms was reported more often for disturbed than for undisturbed children, although not always significant at the 0.05 level of confidence. The symptoms which appeared significantly more often in the disturbed boys

were: sleeping trouble, trouble getting along with other children, nervousness, unusual fears, and stealing. Those symptoms which appeared significantly more often in the disturbed girls were: sleeping trouble, lying, and making a fuss about going to school.

DISCUSSION

The foregoing sections present data to confirm the hypothesis that a symptom inventory can be used for screening children for psychiatric difficulties. The findings show a reliable and positive relationship between the number, frequency, duration, and severity of symptoms reported by a child's mother and the degree of disturbance found in the third grade child. They also show that prediction of disturbance from the mother's report is imperfect. The discussion of these findings is best stated in terms of the actual degree of success one would have had in predicting disturbance in these children from the reports of symptoms by the mother.

There are essentially 3 types of screening objectives for such an instrument as this symptom inventory: (1) prediction of *both* the presence and the absence of disturbance; (2) prediction of the *presence* of disturbance in the child—when can one be most sure that he is disturbed? (3) prediction of the *absence* of disturbance—when can one be most sure that the child needs no psychiatric attention? The success in achieving each of these objectives is discussed below.

Maximum Success.—If one wishes to maximize the success in predicting both presence and absence of disturbance, one must set a critical score near the middle of the range. In this case one would set the critical score at 4 symptoms. If the mother reports 4 or more symptoms, one would predict disturbance; if the mother reports fewer symptoms, one would predict no disturbance. Applied to these data, such predictions would lead to 12 false positives, 18 false negatives, and 61 correct predictions, or a 67% success predicting both presence and absence of disturbance.

Predicting Presence of Disturbance.—If one wished to be sure that a child was disturbed, he would select a cutting point near the high end of the scale. In this case success would be measured in terms of the num-

ber of false positives, or the number of times the children selected were found, in fact, not to be disturbed. In such a case, one would set the critical score at 7 symptoms, and he would predict that all children whose mothers report 7 or more symptoms will be disturbed. Applied to the school sample, such a prediction would lead to 1 false positive in 7, or about 86% success.

Predicting Absence of Disturbance.—If one wished to be sure that a child was not disturbed, he would select a cutting point near the low end of the scale. In this case success would be measured in terms of the number of false negatives, or the number of disturbed children not included in the group screened as possibly disturbed. In such a case, one would set the critical score at 2 symptoms, and he would predict that all children whose mothers report fewer than 2 symptoms were clear of disturbance and need not be examined further. Applied to the school sample, such a prediction would lead to 2 false negatives in a total of 23, or about 91% success.

A second measure of success by this last method, the most typical of public health activities, is the percentage of actually disturbed children who are "missed," or not included in the group screened as needing further examination. Applied to the school sample, this prediction would result in the omission of 2 in 31 disturbed children, or about 93% success.

SUMMARY

Data have been presented to show that, in a sample of 91 school children and a sample of 35 clinic cases, a reliable, positive relationship exists between the number, frequency, duration, and severity of the symptoms reported by a child's mother and the degree of sickness found in the child. The relationship permits one to use the mother's report as a screening instrument with more success than with most medical screening techniques.

BIBLIOGRAPHY

1. Anderson, John E. *Education*, 73:210, 1952.
2. ———. Personal communication, 1954.
3. Buchmueller, A. D., and Gildea, Margaret C.-L. Group therapy for parents of behavior problem children in public schools: report of work in schools in St. Louis County. Read before the first annual meeting of the International Congress of Group Therapy, Toronto, August 1954.
4. Eitzman, Bonita C. A follow-up study of children treated at the St. Louis County Child Guidance Clinic between October 1, 1950 and October 1, 1952. Unpublished MSW Thesis, St. Louis University, 1954.
5. Gardner, George. *Psychiatric Treatment*, pp. 131-133. New York: Williams & Williams, 1953.
6. Kanner, Leo. *Child Psychiatry*. Baltimore: Charles C Thomas, 1942.
7. Levy, David M. *Maternal Overprotection*, p. 227. New York: Columbia University Press, 1947.
8. Ullman, C. A. *Identification of Maladjusted School Children*. Public Health Monograph, No. 7, 1952.
9. Warner, W. L. *Social Class in America*. Chicago: Science Research Associates, 1949.
10. Witmer, Helen. *Smith College Studies in Social Work*, p. 347. Vol. III, 1933.

NEUROPSYCHIATRIC ASPECTS OF ACUTE POLIOMYELITIS^{1, 2}

JIMMIE C. B. HOLLAND, M.D.,³ AND MARTIN R. COLES, M.D.⁴

The epidemic of poliomyelitis in Boston in 1955 provided an opportunity for extensive studies of the course of this disease. Unusual psychological phenomena which occurred in acutely ill patients were quickly brought to the attention of the psychiatric staff at the Massachusetts General Hospital. A cursory survey of the literature disclosed few clinical studies of the neuropsychiatric aspects of acute poliomyelitis (1, 2, 3, 4). This study was designed, therefore, to investigate the delirium observed in several patients, the psychological impact of an acute and crippling illness, and the possible role of a psychiatrist in the management of this disease.

MATERIAL AND METHODS

One hundred and eight hospitalized adult patients were interviewed. Of these, 46 were in respirators, and they were interviewed repeatedly for periods up to 6 weeks. Of the remaining 62 nonrespirator patients, 48 suffered from varying degrees of paralytic poliomyelitis and 14 had nonparalytic poliomyelitis. The 62 patients in the nonrespirator group were interviewed only once unless there was therapeutic reason for additional interviews. The age range of the patients was from 15 to 58 years, and 78 percent were between the ages of 20 and 35.

The interview technique was modified, when necessary, to comply with the severity of the illness. The interviews, one-half to 1 hour in length, included a description of mental status: general behavior, stream of thought, mood, content of thought, orientation, memory, insight, and judgment. They

also included a brief social history and an attempt to assess the patient's emotional response to his illness. It soon became apparent, however, that it was necessary to modify this technique for the respirator patients. Interviews were usually limited to 5 to 15 minutes. The psychiatrist wore a mask, and in those cases where a tracheostomy had been performed it was necessary for the interviewer to cover the end of the tube with his finger to enable the patient to speak. The only way the sick person could see the psychiatrist was through the mirror at the head of the respirator. Even these brief interviews were frequently interrupted by mechanical aspiration of the tracheostomy tube, adjustments inside the respirator, and by rapid fatigue of the patient. Although the interviews were brief, they were sufficient to establish the presence or absence of delirium, to assess the patient's psychological reaction to the respirator, and to approximate his mood. When delirium was present, disorientation, confusion, thought content, mood and sensorium were described as well as possible. When a patient's physical and mental state permitted, interviews were allowed to become psychotherapeutic. The investigation of most respirator patients included some contact with persons who were close to them. Relatives, nurses, physicians, and clergymen were interviewed. Throughout this study the same 2 psychiatrists conducted the interviews. The first few patients were interviewed by both together in order to assure a similar interview technique in this unusual situation.

OBSERVATIONS

Delirium.—In 17 patients we observed a transient delirium. Of these, 15 patients were in respirators. One patient had bulbar signs but was not placed in a respirator, and another developed his delirium before a respirator was used. All patients were in the acute febrile phase of poliomyelitis at the onset of the delirium, and all showed neurological signs of bulbar or bulbospinal involvement. The delirium occurred early in the hospital

¹ Read at the 112th annual meeting of The American Psychiatric Association, Chicago, Ill., April 30-May 4, 1956.

² This investigation was supported in part by a Research Fellowship from the National Institute of Mental Health, United States Public Health Service.

³ Present address: 302 Crosby Blvd., Buffalo 21, New York.

⁴ Massachusetts General Hospital, Boston, Mass.

course, varying from the first to the 11th day after admission. In the 15 deliria observed after confinement in a respirator, onset was on the first to the 10th respirator day. In 2 cases, the delirium and confusion were part of a steady downhill course leading to coma and death. Seven patients became comatose, but recovered. Three of these had severe but short episodes of hypoxia caused by retention of tracheo-bronchial secretions or by mechanical failure of the respirator. Eight patients never became comatose. We were usually able to fix the time of onset of delirium within a matter of hours, but inasmuch as the sensorium cleared gradually the exact duration of the delirial state was difficult to determine and has been arbitrarily chosen. It appeared to vary in length from as short as 5 days to as long as 6 weeks; the average time was about 2 weeks. In general, the delirium disappeared at the time the patient became afebrile, or shortly thereafter.

Delirious patients showed a fluctuating level of consciousness from one interview to another and even within the course of a single short interview. At times they were clear, alert, and oriented; at other times incoherent, drowsy, and confused. Restlessness and excitement were occasionally observed. The span of attention was short and both recent and remote memory was often grossly impaired. Two patients had a history of gross psychiatric difficulties prior to their attack of poliomyelitis, but no qualitative differences could be noted between their delirium and that of the other 15.

Thought content was frequently related to sounds and objects of the environment which were misidentified and falsely interpreted. At times frank delusions and visual hallucinations appeared; a subtle shading between illusions, delusions and hallucinations made classification difficult. The delusions and hallucinations were usually concerned with pleasurable experiences, such as being at home, riding in an automobile or plane, or taking a boat trip. They frequently involved motion of some type. An occasional patient took his respirator with him on his imaginary flights. Sometimes a patient described his hallucinations as if they were vivid dreams which he recognized as such, but at other times they were entirely real to him. Such

hallucinatory experiences seemed to be enjoyable rather than disturbing and were accompanied by a pleasurable affect. They occurred most frequently at night but also at other times when the patient was falling asleep.

A few patients, at one time or another, had frightening illusions or hallucinations. We also observed occasional evidence of anxiety, apprehension, fear of being harmed, and accusatory attitudes toward the ward personnel, sometimes of blatantly paranoid nature. All patients who survived their illness recovered from the delirium. Gradually they had fewer imaginary experiences and progressively longer periods of lucidity until a sustained normal mental status was restored. As patients improved, however, many exhibited concern over their "strange behavior," which they recalled vividly, and expressed fears of "losing their minds."

A clinical picture of the delirium is illustrated by the following cases:

Case 35.—B.D., a 34-year-old white married engineer, the father of 4, entered the Massachusetts General Hospital on August 7, 1955, with paralytic poliomyelitis. One day before admission he complained of headache, backache, and abdominal distress. On the day of admission, his family physician had discovered a stiff neck. At that time the patient complained of frontal headache, photophobia, intense low back pain, chills and fever. The cerebrospinal fluid contained 240 white cells. By afternoon of the day of admission he had developed intercostal, diaphragmatic, and bilateral leg and arm weakness. He was placed in a respirator and a tracheostomy was performed. Intravenous fluids were given and a nasogastric tube was inserted. The patient was hypotensive for 2 days and levarterenol (Levophed®) was administered. Five days after admission, he was oriented and alert. He was still febrile (101° to 102°) and his medical prognosis was considered poor. He was first seen by one of us (R. C.) on the 11th day of hospitalization. The nurses' notes revealed that he had fluctuated between being unresponsive and being rational and clear during his second hospital week. In an interview lasting 15 minutes, the patient was cooperative in explaining that he had been "hallucinating." He talked about driving his family to a friend's house at the beach, and stated that he always drove to places "out of the hospital." He said that he knew these thoughts were absurd, "but still I go." He said that this had been occurring 2-3 times a day but now only once a day. Memory of recent events was vague. He reported that he was cheerful most of the time and that "prospects looked good." When he came in he was "quite sick," but now was "better" and all would "turn out right in the end." He

respirator. He declared that time was very unimportant and that he was "not worried about something to occupy my mind." He had several medical complications which resulted in some temporary "blue periods" but his general optimistic outlook and assurance that he would soon be well persisted. He later demonstrated the use of portable respirators to new patients, and his cheerfulness and encouragement were a source of support to others.

Case 27.—D.C., a 23-year-old unmarried Mormon missionary, was placed in a respirator on September 1, 1955, because of rapidly progressing bulbospinal poliomyelitis. When seen by an examiner (R.C.) the following day, she was alert, smiling, and talkative, and stated a strong dependence on her religion for "keeping me cheerful through it all." She was not depressed and was confident that being in a respirator was "only a phase." There were no signs of a delirious state. Although her condition was precarious for over a week, each day she would tell the examiner, "I am nearer to getting better." She would smilingly and repeatedly talk about the most morbid aspects of her disease with no evidence of sadness or fear. On one occasion she told the examiner, "My lungs are dead, but it is only a matter of time and prayer." Over a 6-week period, her physical state remained unimproved, but her buoyant spirits persisted. On several occasions, the patient remarked how fortunate she was to be less seriously ill than others. On later visits, although she had made no progress toward recovery from the severe muscular and respiratory paralysis, she was still firmly confident of eventual full return to health.

Response of Paralytic Patients.—A variety of psychological mechanisms were observed in patients with paralytic disease. Of the 48 paralyzed nonrespirator patients seen, well over half demonstrated rationalization and denial. Rationalization was evidenced by: "This has been an interesting and valuable experience," or "I am lucky now to have immunity." Denial was stated in phrases like: "Though my legs are paralyzed today, I expect to be back to work soon." Patients who obviously would require crutches and braces to walk talked of being up and about and of returning to work in the near future. At the time they seemed unable to accept a more realistic view of their disability. Some patients described their paralysis as "minimal" or "very slight" in definite contradiction to their true status. In many of them, however, crying and signs of depression occurred when the first attempts at physiotherapy forced them to recognize the reality and extent of their paralysis. Despite repeated requests for reassurance early, patients often became angry with their doctors later, for

what they then felt had been deception about the eventual outcome of their paralysis. Many patients made references to the illogical and whimsical vagaries of Fate, with lamentations such as "Why did this have to happen to me?", "What did I do to deserve this?", and "Bad things always happen to me."

In the paralyzed group, evidence of psychological regression was most frequent in those who were severely paralyzed. One young woman who had been transiently in a respirator said on several occasions, "I'd rather be upstairs in a respirator where I got more attention." Another woman with severe bilateral leg paralysis, a formerly self-sufficient instructor of physical education, quickly regressed to a demanding, petulant individual who threw objects at the nurses during temper tantrums. In some cases, by contrast, the disease was looked upon as a challenge. Frequent references were made to "licking polio" and "fighting the disease," as if the acute course of the illness could be altered by strong exercise of will.

Response of Nonparalytic Patients.—Patients with nonparalytic poliomyelitis were not severely ill medically and showed no evidence of delirium, denial, rationalization or regression. Nonparalyzed patients who were seen early in their illness were anxious and apprehensive about the future course of their disease. They knew they were on a special ward for poliomyelitis where others about them were developing paralysis or respiratory distress. Symptoms and possible outcomes of poliomyelitis were frequent topics of newspaper articles and conversations among the public, and information about poliomyelitis became common knowledge during the epidemic. The dread and fear generally present in unafflicted people in the community were intensified in the patient whose condition might change rapidly, whose outcome was uncertain.

Some patients, whose poliomyelitis at no time resulted in paralysis, and who left the hospital essentially well, were interviewed just before discharge. They were exuberant and happy about their recovery without paralysis. They considered themselves fortun-

nate to have escaped more severe manifestations and residua.

DISCUSSION

DELIRIUM

The transient delirium observed in the 17 patients with bulbar or bulbospinal poliomyelitis presented a strikingly uniform picture. It occurred in such seriously ill patients that they might not have survived without the recent scientific knowledge available, and the expertness of the medical care they received. The paucity of earlier reports of a delirium in poliomyelitis may reflect this fact. Some had, in addition to spinal and bulbar signs and delirium, coma and convulsions, indicating extensive and diffuse involvement of the nervous system. We shall consider the delirium apart from this larger clinical picture.

The delirium was not unlike that described in several other neuropsychiatric conditions. Withdrawal from barbiturates, bromide intoxication, alcoholic hallucinosis, and the encephalitic picture associated with certain poisons and toxins have been described to produce similar clinical pictures. Confusion, a clouded sensorium, and hallucinatory experiences similar to those described in the case presentations are common to deliria resulting from various etiologies. In the delirium we observed, the imaginary experiences at times appeared to be hallucinations, at other times delusions or illusions. Several salient features, nonetheless, seemed typical of this particular delirium. Patients usually had a clear memory of their imaginary experiences and within minutes could explain with clarity and insight that a "dream" had occurred. The experiences were usually pleasurable and nonfrightening. The sensation of motion was common. The term "traveling psychosis" arose from the frequent automobile, plane, and boat trips on which patients thought they embarked. We suggest the possibility that in his toxic state, a patient might misinterpret the constant whir of the respirator motor accompanied by the rhythmic motion of the air about his body as a sensation similar to riding in some type of vehicle. At times the illusory quality was even more pronounced when a patient incorporated parts of the res-

pirator into the travel dream. We are impressed that previous personality apparently did not bear a relation to the occurrence of the delirium. Indeed, recovery was complete in all patients who survived.

In 1884, Strümpell used the term poliоencephalitis for what is generally conceded to be the initial description of bulbar poliomyelitis(5). Previously, poliomyelitis had been recognized as a disease of the spinal cord only. Since then, neuropathological studies have indicated that nearly every part of the central nervous system can be damaged. Patchy lesions of medulla, pons, cerebellum, mesencephalon, diencephalon and cerebrum, in addition to lesions of the spinal cord, have been noted in histologic studies (3, 6, 7, 8, 9).

It is appropriate in a diffuse disease of the central nervous system to attempt correlation of known pathological lesions with the occurrence of particular symptomatic manifestations, *e.g.* delirium. Lesions of the cerebral cortex are usually inconspicuous except for the precentral gyrus which may be extensively involved. No constant lesions of any other cerebral areas have been described. Lesions of the diencephalon, particularly the hypothalamus, have been reported in as high as 85% of cases of bulbar poliomyelitis(8). The occurrence of disordered sleep patterns, gastrointestinal disturbances, and alterations of blood pressure and temperature as probable clinical representation of hypothalamic lesions lend substance to the possibility that emotional instability could also be associated with lesions of this area. Involvement of the midbrain was found in all 111 autopsied patients who died of bulbar poliomyelitis in the Minnesota epidemic of 1946(9). Lesions of this area from other causes have a demonstrated association with delirium: Wernicke's hallucinosis and in some instances, barbiturate intoxication or withdrawal. L'Hermite has reported cases of hallucinosis related to occlusive vascular lesions of the mid-brain which he called peduncular hallucinosis(10, 11). These patients described pleasant dream-like visual hallucinations into which they had insight. Though his conclusions have been questioned, the clinical phenomenon he described resembles that seen in the deliria of our patients with poliomyelitis. In addition, however, we noted confusion, dis-

orientation, and an altered state of consciousness. The association of clinically recognizable bulbar dysfunction in each of our patients with delirium supports, by anatomical proximity, the possibility that pathological lesions of the brain stem may be causally related to the delirium, though it is impossible to delimit a particular area. Pathological studies of the brains of several patients in this report are in progress (12).

The presence of fever, at times of hypoxia, and the effects of medications are additional recognizable factors which might have been etiologically related to the delirium. Deliria occasionally occur during febrile states accompanying other systemic infections. Though clinically these patients did not show more than transitory bouts of hypoxia, unrecognized or sub-clinical hypoxia and even hyperventilation in the respirator must be considered as potentially having occurred. Though drug administration was kept to a minimum, sedatives were occasionally given in small doses.

Purely psychological factors which could account for delirium in the absence of any specific brain lesion must be considered. The work of Hebb and his group (13, 14) which demonstrated that isolation of normal individuals under special conditions can produce psychotic states has been considered by others to be relevant to the genesis of the deliria seen in respirator patients with poliomyelitis (15). Serious illness in a respirator imposes great stress on an individual. Perhaps this stress might have produced a psychotic-like state in some of our patients. For the most part, our patients had motor paralysis or paresis from the neck down; their sensory perception was, however, completely intact. They complained frequently of pain and discomfort. They were not isolated. They were spoken to every half hour by a polio team physician during their critical stage. Twenty-four hour lights, nursing activities, and ward noises produced environmental stimulation. This marked difference from the experimental environment created by Hebb where deprivation of visual and tactile stimulation are essential leaves few similarities with which to support a pathogenesis by analogy.

PSYCHOLOGICAL RESPONSE TO ILLNESS

Denial was the one psychological mechanism seen in the vast majority of paralyzed patients which appeared to bear a direct relationship to the severity of illness. Denial was not seen among non-paralyzed patients. We may speculate that there was little need for such a mechanism in these patients, since most of them were not severely ill. In this study it seemed that overwhelming illness was requisite for use of the mechanism of denial. Denial was a universal reaction in the respirator patients, and became pervasive enough to convey a sense of cheerfulness and confidence at startling variance with the distressing medical facts.

Rationalization, like denial, was seen in many patients, but seemed to be a less rigid and less extensive mechanism. It was particularly common among patients who were not seriously ill. It is of interest that 2 severely ill respirator patients used little denial or rationalization. Each talked intermittently about the possibility of death and the actual severity of his illness. They were the 2 oldest patients in the series, a man and a woman, each over 50.

Certain differences in psychological reactions between the patients in respirators and those with paralytic poliomyelitis who were not in respirators were particularly noteworthy. Whereas the paralytic patients were able to indulge in long range planning, those in respirators concerned themselves with immediate needs and desires. When asked what they thought about, they replied in terms of respirator care, suctioning of the tracheostomy tube, and maintenance of respiratory function. To these patients life had become dependent upon a mechanical device; cessation of its function would entail immediate death. The integrity of the electric circuits, the presence and competence of nursing personnel, and the efficiency of the respirator loomed as the very links between them and life. And, indeed, these links were often realistically threatened. In several cases, for example, electric plugs accidentally were kicked out of sockets, or portholes were left open. In either situation it might have been impossible for the patient to summon help

in time. Such experiences led to overwhelming anxiety, fear, and dread of repetition. Moreover, the emotional impact of repeated hurricane warnings, common at that time in Boston, was considerable because of the possible threat to electric power.

From their first encounter with it, the respirator presents a special problem to patients which is usually marked with anxiety. Here were people whose increasing respiratory distress demanded their adjustment to a fearsome mechanical device, with its attendant implications of critical illness, that they might be given an external force for life's breath itself. Once adjusted to the respirator, however, psychological dependence upon it became marked, often in excess of the actual physical need. Such need for this machine appeared to corroborate Seidenfeld's observation of the similarity to an addictive process(16). It was necessary to plan gradual removal from the respirator, despite good respiratory function, because of a patient's fear of relying solely upon his own breathing. Patients frequently were alarmed during the first few minutes out of the respirator and had to be constantly reassured that they were breathing adequately. As might be expected, complete dependence upon external forces for breathing, eating, elimination and the maintenance of life fostered childlike regression in some patients.

Sustained depression was not consistently observed in any of the respirator patients, but depressive symptoms did occur transiently in the evenings. We believe this may be interpreted as a temporary breakdown of the denial mechanism. In marked contrast to these occasional periods of gloom was the more profound depression seen in the paralytic non-respirator cases which occurred much earlier in their illness. Often it was related to the start of physiotherapy and the consequent necessity to recognize and accept their actual disability. Here, depression might have been an intermediate stage in the progression from denial to adjustment to the disability. Later, in the rehabilitative phase and thereafter, it seems that previous personality determines each patient's lasting response to his disease(17).

ROLE OF THE PSYCHIATRIST

In this study of 108 patients of varying socioeconomic backgrounds, we were surprised by the absence of negative attitudes towards being seen by a psychiatrist. Many patients enthusiastically welcomed our visits. Interviews offered them an opportunity to express their fears and anxieties. They were unable to express these feelings to their families or to a medical and nursing staff with little time to listen. A real need existed for a person with whom they could discuss the emotional impact of their illness. Although consultation regarding serious psychiatric problems in a few patients helped to initiate this investigation, it soon became clear that the majority of patients had substantial emotional problems related to the illness legitimately within the purview of a psychiatrist. With a psychiatrist on a hospital polio team certain predictable difficulties in treatment, management, and rehabilitation were anticipated, and in some cases, expeditiously handled. In addition, psychiatric consultation with the families, in some instances, helped them to adjust to the serious illness and long rehabilitation of their relatives.

The polio nurse requires training in the special emotional problems involved in the care of these patients, and this is best provided by a psychiatrist working with the team. Finally, arrangement of respirators in compatible social groupings so that patients can maintain each other's morale might best be done by a participating psychiatrist.

SUMMARY AND CONCLUSIONS

1. A neuropsychiatric study of 108 hospitalized patients with acute poliomyelitis was made during the Boston epidemic of 1955. Of these, 46 patients were in respirators, 48 had paralytic poliomyelitis not requiring a respirator, and 14 had non-paralytic poliomyelitis.

2. A delirium was observed in 17 patients who were acutely ill with bulbar or bulbo-spinal poliomyelitis. This delirium was characterized clinically by a varying level of consciousness, pleasurable hallucinatory experiences and frequent illusions and delusions. There was waxing and waning of disorienta-

tion and confusion with a shortened attention span. Imaginary experiences were often described by patients as "wakeful" or "vivid dreams." The delirium occurred with the acute toxic phase of illness and lasted an average of two weeks followed by complete recovery in those patients who survived.

3. Psychological responses to acute poliomyelitis were studied in an attempt to delineate specific mechanisms involved. Rationalization, denial, and regression were often observed and have been described. The occurrence of anxiety and depression at various stages of the disease is noted and discussed.

4. The role of a psychiatrist as part of a hospital polio team is emphasized (5).

BIBLIOGRAPHY

1. Luft, R., and Muller, R. *Acta. Med. Scandinav.*, 127: 448, 1947.
2. Barrett, A. M., Gardner, D., and McFarlon, A. M. *Brit. Med. J.*, 1: 1317, 1952.
3. Scheinker, N. *Arch. Neurol. Psychiat.*, 57: 565, 1947.
4. Brodie, M. *Amer. J. Dis. Child.*, 48: 57, 1934.
5. Strümpell, A. *Allg. Wien. Med. Ztg.* 29: 612, 1884.
6. Baker, A. B., Matzke, H. A., and Brown, J. *Arch. Neurol. Psychiat.*, 63: 257, 1950.
7. Matzke, H. A., and Baker, A. B. *Arch. Neurol. & Psychiat.* 68: 1, 1952.
8. Baker, A. B., Cornwell, S., and Brown, I. A. *Arch. Neurol. & Psychiat.*, 68: 16, 1952.
9. Matzke, H. A., and Baker, A. B. *Arch. Neurol. & Psychiat.* 65: 1, 1951.
10. L'Hermite, J., Levy, G., and Trelles, J. *Rev. Neurol.*, 1: 382, 1932.
11. L'Hermite, J. *Encephale.*, 27: 422, 1932.
12. Adams, R. D. Personal communication.
13. Bexton, W. H., Heron, W., and Scott, I. H. *Can. J. Psychol.* 8: 70, 1954.
14. Hebb, D. O. *Am. J. Psychiat.*, 3: 826, 1955.
15. Mendelson, J. H., and Foley, M. Paper presented at annual meeting, American Neurological Association, June, 1956.
16. Seidenfeld, M. A. *Am. J. Orthopsychiat.*, 25: 738, 1955.
17. Holland, J. C., and Coles, M. R. Unpublished observations.

DISCUSSION

JOSEPH S. BIEMAN, M. D. (Baltimore, Md.)—Acute, major, and crippling diseases have been intensively studied from the medical and physiological point of view, with only very little attention until recently to the psychological impact of the sudden

physical traumata. Antibody response and pleocytosis of the spinal fluid are thought of as immediate defensive reactions of the body to the invasion by the poliomyelitis virus, but, as Drs. Holland and Coles have demonstrated, the affected patients have other defensive reactions on an ego level that are probably just as necessary for survival.

The large number of patients studied, representing different types and degrees of severity of poliomyelitic involvement, afforded a good opportunity which the authors capitalized on quite successfully for comparative observations concerning the use of denial as a defensive reaction in the acute stage of the illness.

Denial is an ego defense mechanism designed to ward off or change an unpleasant or painful external reality. The use of denial by fantasy, words, or acts is accepted as something quite necessary and appropriate for the very young child. This, of course, is not true for the adult who, when he denies the obvious, is immediately considered to be at least unrealistic. But perhaps the poliomyelitic adult *needs* to be, since reality here, as represented by motor paralysis or imminent death from respiratory failure, may be too overwhelming. Overwhelming in what way? What would happen if the use of denial were not possible; what purpose does denial serve? The authors have speculated that depression is the intermediate phase between denial and acceptance of the illness. Perhaps another possibility is that denial is, in a manner, a defense against the depression which may come all at once if the illness and its implications were accepted and allowed rapidly to lower the self-esteem of the patient. Denial would defend against depression by nullifying the loss of self-esteem.

One very interesting finding was the difference in the degree of denial used by respirator and non-respirator paralytic cases. The respirator patients had a denial in affect also, as evidenced by their unexpected cheerfulness. The denial seems to be more complete. It seems permissible to speculate that the denial in affect is a defense against an underlying depression. The more immediate and everpresent threat of a respiratory death may make this completeness more necessary than in the paralytic cases. One also wonders whether the physical and psychic regression enforced by being in the respirator might not facilitate the use of denial.

It has been quite interesting to compare the reactions of adults with those of the children aged 4 to 12 with lower extremity involvement whom we have studied in an interdisciplinary research project at the Psychiatric Institute of the University of Maryland under the direction of Dr. Jacob Fine-singer.

Denial was used by these children quite extensively and in varied forms. In some cases the illness itself was denied. One 6-year-old boy said that in the winter he would think about getting cancer and in the summer he would think about getting polio. He had been afraid of getting polio because there were several kids in the neighborhood who had it and now he was not taking any chances on catching it himself. The boy talked about this in

* The authors wish to express thanks for the advice of Drs. Erich Lindemann, Carl Singer, Stanley Cobb, John Nemiah and Peter Sifneos.

a cut and dried way without affect. An 11-year-old boy, looking quite frightened, at first said that he felt "all right," and then went on to state only that he "might have polio" and he doesn't "want to think about it." One might say that he was denying his illness by making the diagnosis a "might" or "maybe" one, and only a possibility instead of a reality. The denial of the severity of the illness is illustrated in the remarks of an 11-year-old girl. Being in the hospital and not able to go outside didn't bother her since she knew she was going to get well. Another 11-year-old girl at first smiled quite sweetly in response to questions about how she felt when she found out she had polio, but only minutes later she unsuccessfully tried to cover up her tears with this smile while talking about the same subject.

As these children were followed from the acute through the convalescent period, the use of denial by fantasy of the loss of motility became quite evident. For example, one boy in play fantasied himself turning into Superman who then flew around. This same boy would sing about Davy Walker instead of Davy Crockett. Material like this leads one to speculate as to whether the content of this very interesting "traveling psychosis" may not be, in part, a denial by fantasy of the extreme immobilization of the respiratory patient. The almost complete lack of relevant literature on the psychiatric reactions of acute poliomyelitis patients reveals the distance the psychiatrist has stood from the acute infectious disease ward. Dr. Holland and Dr. Coles have helped place him on this ward by the bedside and by the respirator.

ADMINISTRATIVE PSYCHIATRY

A NEW FIELD—CHALLENGING AND REWARDING

WILLIAM B. TERHUNE, M.D.¹

The physician, whether he is in private practice, in a group organization, or in a hospital position, is doing some administrative work. It is not generally realized that the intern, the resident, the ward physician, and the chief of a service, all have some administrative duties and should understand the basic principles of administrative procedure. Some training in administration should be a part of the under-graduate medical program. The hospital superintendent, the recognized administrator, must of course be well grounded in this field(8, 14).

Up to a few years ago, physicians generally felt that administration was unrelated to their major concern—the care and treatment of patients. Institutional administration, specifically in hospitals, was considered a matter of budgets and red tape, of political finessing and compromises, a chore to be done by “the other fellow,” if possible. It was perhaps natural that this view was held by psychiatrists and persons preparing to be psychiatrists. Modern emphasis on the individual treatment of mental illness and on the doctor-patient relationship casts administration in the role of merely facilitating treatment. It is recognized today, however, that it is in itself a therapeutic tool, a part rather than an adjunct to treatment(15).

The most important single factor in the efficacy of treatment in a mental hospital is the intangible element that can best be described as “atmosphere,” according to the findings of a committee of psychiatrists which met under World Health Organization auspices in 1952 to consider the essential elements of adequate mental hospital care. “The mental hospital’s role,” the committee’s report states, “is that of a therapeutic community. As in the community at large, one

of the most characteristic aspects of the psychiatric hospital is the type of relationship between people that is to be found within it. The nature of the relationships between the medical director and his staff will be reflected in the relationship between the psychiatric staff and the nurses, and finally in the relationship not only between the nurses and the patients, but between the patients themselves(16).”

Implicit in this atmosphere and in these relationships is effective administration. Let us see why this is so. “Treatment in the mental hospital,” according to a 1947 statement by the Group for the Advancement of Psychiatry, “is regarded as a total institutional process, rooted in medical responsibility, but with psychiatrically oriented participation by every staff member, each contributing to the total process on the basis of clearly established administrative allocations of responsibility and of well-grounded and disciplined professional attitudes(5).”

Note the words “clearly established administrative allocations” in the above statement. The mental hospital’s administrative structure must carry out the objective of improving the individual patient’s condition as speedily as possible. The hospital’s facilities and the services of its personnel must be coordinated through effective administration, so that they constitute a unified instrument of treatment and rehabilitation(15).

Viewed in this way, administration is not something divorced from and opposed to clinical psychiatry. Since good administration is, in essence, good interpersonal relations, it calls for therapeutic skills of a very high order(12). I believe that if residents in psychiatry are brought to understand these aspects of administration, they will be eager to enter this comparatively new and challenging field.

The basic principles and procedures of administration that have been developed by industry are applicable to administration in hospitals and other medical groups. In brief,

¹ Chairman, Sub-Committee on Education and Training, Committee on Certification of Mental Hospital Administrators, American Psychiatric Association; Medical Director, Silver Hill Foundation, Inc., New Canaan, Connecticut; and Associate Professor of Clinical Psychiatry, Yale University.

administration consists of deputizing, authorizing, and supervising. The first 2 functions call for initial action that is decisive and thoughtful. The right people must be chosen—people capable of carrying the responsibilities deputized to them; and they must be given authority commensurate with these responsibilities. The third function, supervising, is a continuing one that presents the main problem in administration. It is based on a free flow of information from the top echelons to the lowest levels of the organization, and from the lowest to the top. There must be a 2-way flow, up and down the ladder of organization, and also a horizontal flow (if one may use such a term) between branches of the organization at various levels (1, 8).

Communication, it has been said, is the heart of good administration. The most effective means of communication are face-to-face and group discussions. The findings of social science have shown over and over again that understanding and compliance are greater when information is derived from group decisions rather than from directives and orders superimposed from above. Written data—memoranda, manuals, posters, and bulletins—should be thought of chiefly as a means of recording decisions arrived at through conferences and group action (8). We touch here upon many factors that are of interest to the psychiatrist; unfortunately, they cannot be discussed at length in this paper.

These general principles and procedures of administration are applicable in any organization. Nevertheless, the analogy between industrial and medical administration must not be pushed too far. Considering specifically the mental hospital, the "product" is the patient and his recovery. Obviously, it cannot be turned out on a mass-production basis; it must be "crafted" to individual needs. The motive is the maximum improvement of the patient, whereas in industry the motive is profit (8).

As a matter of fact, the application of administrative principles and procedures is not identical in a general hospital and a mental hospital. For this reason, The American Psychiatric Association came to realize that standards and certification procedures should be set up for mental hospital administrators,

in line with the trend in training courses and certification for general hospital administrators (11). This view was "without prejudice" to the many superintendents who have been trained by precept and experience, and are serving as able administrators. More formal and adequate methods of training are needed today (12). A permanent Committee on Certification of Mental Hospital Administrators was established by The American Psychiatric Association in 1953. In addition to setting up standards, evaluating the qualifications of candidates for certification, and issuing certificates, the Committee was empowered to advise on courses of study and technical training in this field and to distribute information that would promote the fitness of persons wishing to qualify as mental hospital administrators (3).

Under the impetus of the Committee's activities, and also because of the growing awareness of the importance of administrative psychiatry, training courses have been established at the Menninger Foundation, Columbia University and the University of California; and others are in the planning stage.

A study is now being undertaken at the Yale University School of Medicine to ascertain the specific requirements for training in administrative psychiatry, and to determine the best pedagogical procedures. This study, covering a 5-year period, is sponsored by the Yale School of Public Health, Section on Hospital Administration, the Faculty of Psychiatry, and the Connecticut Department of Mental Health, with assistance of funds provided by the National Institute of Mental Health.

The course at Columbia University, which opened in the fall of 1956, is cooperatively administered by the University's School of Public Health and Administrative Medicine and the Department of Psychiatry of the Faculty of Medicine with consultation and participation in the teaching program by the New York State Hospital Service and The American Psychiatric Association.

The curriculum time, totaling 20 months, is divided into 4 sections, leading to a Master of Science degree in Administrative Medicine: Basic courses in the School of Public Health and Administrative Medicine, courses

in the Department of Psychiatry, supervised field observation in community and institutional programs, concluding with a thesis relative to a special project carried out by the candidate. Eight of the 20 months are in academic residence, divided into two 4-month periods; 4 months in academic residence, 12 months in a supervised administrative residency (or in a position already held by the candidate) during which a special project is carried out, and the final 4 months, again in academic residence. The course, as now set up, is designed to fit the individual's need for training, and to provide basic academic material that is lacking. By dividing the academic work in 2 sections, the candidate may take a leave of absence from his position, return to it for a year, and then complete the remainder of his academic residence.

There is a Curriculum Advisory Committee consisting of 10 experienced men and women who consult more formally with the faculty and are available to advise on the eligibility of candidates for admission. The United States Public Health Service has provided a few advanced traineeships for outstanding students.

The Menninger Foundation's School of Psychiatric Hospital Administration had its inception in an informal study group in administration set up at the request of third-year residents. Dr. R. C. Anderson, manager of Winter V.A. Hospital, described this experiment at The American Psychiatric Association's 6th Mental Hospital Institute in 1954, and noted, significantly, that the value of the training was so obvious that it was planned to give the undertaking more definite form(9).

The School as now constituted combines seminars in subjects related to mental hospital administration, with practical experience. Thus the work situation and the theoretical material can be correlated. Supplementing these 2 areas of training are university classes, staff and administrative conferences, elective seminars and the writing of several papers on selected problems of mental hospital administration. Work is undertaken on specific administration problems under the supervision of a certified mental hospital administrator(6).

At Topeka, the course in Psychiatric Hospital Administration is sponsored by the Menninger Foundation in cooperation with Topeka State Hospital, and Winter V.A. Hospital. This training is supplemented by field trips in Kansas to Larned State Hospital, Osawatomie State Hospital, Parsons State Training School, Winfield State Training School, and several hospitals in other states. Additional teaching in special areas of administration is provided by the personnel of the Goodyear Tire and Rubber Company, the Division of Institutional Management of the Kansas Board of Social Welfare, various divisions of the Kansas Department of Administration, the Kansas Legislative Research Council, the Kansas State Board of Health, and Stormont-Vail General Hospital(6).

Three general types of training are used: 1. didactic instruction; 2. a systematic rotation through major departments; and 3. staff conferences and other meetings; field trips, and written projects. The first consists of seminars on principles and techniques of organization and management, and on the problems of operating hospital departments; the second comprises rotation through the departments of each cooperating institution, to provide an opportunity to observe administrative practices in every important area of the hospital. Several Washburn University courses are included. The participation of a state, federal and private hospital enables students to observe the differences in operation of these 3 settings.

Admission to the School is limited to graduates of approved medical schools who are licensed physicians, who have adequate specialty training in psychiatry, have demonstrated an aptitude for administrative work, and an interest in hospital administration as a career(6). The Menninger Foundation provides a stipend of \$7,500 a year for a limited number of students. The first class, consisting of 2 psychiatrists, completed the course in June, 1956. They are now serving as superintendents of large mental hospitals.

I have described the plan of study at Columbia and the Menninger School in some detail, since they may well be the prototype for training in the specialty of administrative

psychiatry. It should be noted that the "trainee" is already a physician who has completed his training in psychiatry, and that the curriculum is designed specifically to fit him for a position as superintendent of a mental hospital.

The importance of the "atmosphere" of a mental hospital was noted earlier in this paper. This atmosphere is set, largely, by the superintendent. He should inspire respect and confidence in his staff and the lay public; he should have intellectual honesty, directness and decisiveness, and a breadth of view, and he should like what he is doing above all other activities (4, 8). This is a large order—and a challenging one. Comprehensive training coupled with a deep understanding of the significance of the administrative work will equip psychiatrists to meet this challenge and fill the need in this area of psychiatry.

BIBLIOGRAPHY

1. Baganz, Crawford N. *Am. J. Psychiat.*, 108: 277, Oct. 1951.
2. Bryan, William A. *Administrative Psychiatry*. New York: W. W. Norton, 1936.
3. Certification Pamphlet, A.P.A. Committee on

Certification of Mental Hospital Administrators, 1953.

4. Duval, Addison. *Am. J. Psychiat.*, 107: 173, Sept. 1950.

5. Group for the Advancement of Psychiatry, Report No. 2: 188 Bulletin, Menninger Clinic, Nov. 1947.

6. Menninger Foundation, School of Psychiatric Hospital Administration (undated).

7. Modlin, Herbert C. *Psychiat. Quart.*, 25: No. 3, pp. 475-83 (July 1951).

8. Myers, J. Martin, and Smith, Lauren H. *Mental Hospitals*, June 1956, 6-10.

9. Noyes, Arthur P. In *Proceedings, Sixth Mental Hospital Institute (1954)*. A.P.A., 1955.

10. Perkins, Clifton T. "Why State Hospital Superintendents Fail." *Am. J. Psychiat.*, 107: 170, Sept. 1950.

11. Overholser, Winfred (Column), *Mental Hospitals*, March 1956, p. 3.

12. *Proceedings, Fifth Mental Hospital Institute (1953)*. Washington: A.P.A., 1954.

13. *Proceedings, Sixth Mental Hospital Institute (1954)*. Washington: A.P.A., 1955.

14. *Psychiatric Nursing Consultation*. Report of Institute for Nursing Consultants in Psychiatry, 1954. Washington: A.P.A., 1955.

15. Russell, W. L. *Am. J. Psychiat.*, 105: 721, April, 1956.

16. World Health Organization, Technical Report Series No. 73; Expert Committee on Mental Health, Third Report. (Quoted by Blain in *Mental Hospitals*, April 1956, pp. 18 ff.)

RAPID TREATMENT OF THE PSYCHOTIC PATIENT INTEGRATING ELECTRONARCOSIS AND PSYCHOANALYTIC PSYCHOTHERAPY¹

ESTHER BOGEN-TIETZ, M. D., AND JO H. JORDAN²

THE PROBLEM

It is a common experience that recovery from a psychotic break is often only temporary or incomplete. We are convinced that many such unsatisfactory results can be prevented. The following case illustrates this point:

Martha, a 40-year-old housewife had been a perfectionistic, chronically helpful and intensely critical woman. During the fatal illness of her mother, Martha nursed her without rest. Returning to her husband and children following her mother's death, she could not eat or sleep and lost interest in everything. Following ECT over a period of several months, she returned home, apparently her "old self" again. Within a year, she relapsed into a serious depression and was again stabilized by ECT and supportive psychotherapy. A few months later, when her symptoms returned for the third time within 2 years, she was treated by a psychoanalyst; but he was unable to establish a workable contact. Becoming more remote and discouraged, Martha discontinued therapy; 2 months later she was hospitalized because of a psychotic depression. At this time she was started on a treatment program integrating intensive electronarcosis (EN) and dynamic psychotherapy. She returned to her husband and children and, with continued treatment, gradually gave up her obsessive-compulsive defenses. She has emerged a spontaneously warm, serene woman who no longer dominates everyone with helpfulness, and has shown no signs of depression in the 3 years since treatment began.

The basic personality of this patient was modified during the treatment and this may be the reason that she has remained well. Changes in the personality can occur only after the patient has given up unsatisfactory defenses and acquired more suitable ones. However, if we are to help a patient to change his defenses, he must be capable of contact. But the psychotic patient uses a withdrawal from reality contact as a major defense against anxiety-producing situations. The question is: How can one reach a person who habitually withdraws from contact?

¹ Read at the 112th annual meeting of The American Psychiatric Association, Chicago, Ill., April 30-May 4, 1956.

² From the department of psychiatry, College of Medical Evangelists, Los Angeles, Calif. Address: 544 Mariposa Ave., Los Angeles 5, Calif.

By prolonged and painstaking work, a few psychoanalysts have been able to reach the psychotic by utilizing the minimal reality contact of which he is still capable. The long time required for such treatment has two hazards for the patient:

1. Failure to establish a rapid return to reality estranges the patient's family, job and community relationships. This estrangement increases with time.

Ten years ago an executive giving a public address astonished a large audience by accusing the government of a fantastic plot. His family had observed his personality change over the preceding few weeks. He was hospitalized by a psychiatrist and treated with ECT 3 times a week for several weeks, followed by supportive psychotherapy. He quieted down without giving up his principle delusional ideas. He was unable to leave the sanitarium, much less resume his work. After 9 months of hospitalization, he was started on an intensive treatment program. At the end of 6 weeks, he was without gross symptoms. Nevertheless, it required 3 more weeks before we could persuade his wife to take him home. He had the greatest difficulty being reinstated in his job because, after such long hospitalization, his former associates feared and mistrusted him. During the patient's long absence his son had become delinquent and it was very difficult for the father to regain his son's confidence and help him.

In this case the patient's recovery was made especially difficult because the external contacts had deteriorated with time.

2. The longer the break with reality, the more restitution symptoms the patient will use to ward off anxiety.

Louise was an attractive 20-year-old college student from a cultured home. At college, away from home for the first time, she found it impossible to concentrate on her work, gave up social life and returned home in a panic. She became hostile and seclusive, and developed ideas that her parents wrote newspaper editorials about her and that there were spotlights focused on her. Almost at once she was taken to a psychoanalyst who treated her with daily psychotherapy for over 3 years. She was not able to resume her college work and led a bizarre life. She lived for a while in various sanitariums and sometimes in an apartment of her own accompanied by an elderly woman attendant; she was remote, unsocial, secretive and occasionally dangerous to herself and others. Finally, she had

to be committed because she was uncontrollable. After 6 weeks of hospitalization, during which she received 20 EN, she was started on active psychotherapy. One month later, she was able to leave the sanitarium and live with other recovering patients in an apartment, under supervision. Maintenance electronarcosis was continued along with psychotherapy. Three years after EN was begun, although she has attended college for 2 years and is becoming a spontaneous, active, charming person, she retains considerable anxiety regarding close relationships.

The slow recovery of Louise seems primarily attributable to the fixation of psychotic mechanisms since her break with reality was prolonged by palliative therapies. Of course, both of the deleterious effects of time are present in all cases.

Cases such as these have led us to the following convictions: (1) To insure lasting recovery from a psychosis, it is often necessary to change the prepsychotic personality. (2) The more rapidly contact with the patient can be established, the more rapidly can we restructure the personality. (3) EN can be used to obtain contact rapidly and to maintain it. (4) With adequate contact, psychoanalytic psychotherapy can be used to restructure the personality.

Below is a treatment program for the psychotic patient that utilizes simultaneous application of these two methods by individuals trained in both.

THE ROLE OF ELECTRONARCOSIS

Electronarcosis is a modified, electrically induced seizure followed by several minutes of subconvulsive electrical stimulation, sufficient to maintain bilateral flexor tone in the arms without interference with respiration. Since any state implying loss of control arouses great anxiety in a person whose ego is already seriously threatened, our technic of electronarcosis emphasizes the reassurance, comfort and safety of the patient. For example, special precaution against anxiety-producing conversation must be employed. Intravenous thiopental, to which has been added atropine and caffeine, is used to eliminate awareness of the placing of the electrodes and the insertion of tongue guards or the apprehension following muscle relaxants. Use of the glissando technic and of intravenous anectine permits control of the sei-

zure with a nearly complete elimination of muscular violence. Preoxygenation under positive pressure, routine insertion of an airway, and the use of carbogen (5% CO₂ in oxygen) following the initial grand mal seizure prevent anoxemia.

The patient is spoken to on awakening after EN to assure him that he is not alone, given a cup of coffee or other drink and allowed to rest as long as he wishes. This is the ideal time for establishing contact as described in detail below.

An essential feature of our use of EN is the spacing of the treatments. As soon as the patient is hospitalized and the diagnosis established, daily EN is begun and is continued until 10-12 treatments have been given. After that, the patient receives 3 treatments the third week, 2 the fourth week and then one a week until treatments can be spaced further apart and finally are no longer needed. In the subsequent stages of recovery, EN may be used to tide the patient over stressful periods.

With this spacing there occurs a predictable sequence of behavior. We consider the patient's progress as taking place through 5 stages. These are: (1) stabilization, (2) confusion, (3) reorientation, (4) rehabilitation, and (5) insight.

During the stage of stabilization, which occurs during the first week, the patient eats and sleeps better and appears his old self. He is polite and guarded, and his conflicts seem to be covered.

In the stage of confusion, in the second and third weeks, the patient unashamedly begins to show behavior which is characteristic of the first years of life. He may become extremely passive or aggressive, clinging, affectionate, untidy or exhibitionistic, often depending on nursing care for dressing and feeding.

During the fourth week the confusion clears and the patient reaches the stage of reorientation. He begins to make repetitive requests for orientation: Where am I? How did I get here? He appears demanding, self-centered, possessive, has a low frustration threshold, and reminds one of a preschool child.

During the stage of rehabilitation in the fifth and subsequent weeks, signs of self-

assertion appear and the patient's capacity for simple enjoyment is markedly increased. Although dependency needs continue, as evidenced by moodiness and rejection of responsibility, the patient shows increasing ability for reality contact and an eagerness for new experiences.

In the stage of insight the patient behaves much like a neurotic person.

This unfolding of successive phases during EN treatment facilitates the concomitant use of dynamic psychotherapy.

THE ROLE OF PSYCHOTHERAPY

Psychotherapy is varied according to the patient's progress. In the stage of stabilization only friendly attention is offered. Attempts to uncover conflicts are usually futile and may reactivate psychotic symptoms.

The treatment of the patient in the period of confusion is an essential aspect of our method. This brief, undefensive state is utilized to meet the emerging infantile needs of the patient with maternal care. Regressed behavior and speech, messing with food or incontinence are not rejected or criticized. All persons connected with the patient's care accept his behavior without undue emotion, the way a sensible mother takes care of an infant. Visitors are not encouraged during this time: we aim at a complete relaxation of standards conforming to the requirements of adult social living. During this stage the therapeutically correct response of all concerned with the treatment is more important than the patient's contact with one specific therapist.

The state of confusion is important in two ways: the uninhibited patient conveys to the observing therapist drives otherwise masked and distorted by habitual defenses. This facilitates rapid understanding of dynamics which will prove time-saving in later psychotherapy. Also, during this time of confusion, we have an opportunity to change the patient's way of responding to human contact and thus to reality.

As the patient wakes up from EN, his recognition of the outside world is slowed down. The recovery room in which he awakens offers a peaceful, reassuring atmosphere. We use a procedure symbolic of infant feeding to observe the patient's re-

action to external stimuli and to establish contact. The most accessible state is immediately following an EN, during the second and third weeks. The physician or assistant carrying out this procedure in the first awakening moments should be capable of establishing an atmosphere of maternal warmth, tenderness and total acceptance. Standing close to the patient, the therapist presents a moistened, rope-handled lollipop to his lips. The patient may make sucking movements, opening his mouth, or clenching his teeth to prevent the candy from entering. He may accept the candy and bite it fiercely; he may spit it out or actively prevent its removal. The therapist does not interfere but, guided by the patient's response, continues to offer the stimulus with encouraging words such as "It is good," "You can take it," "I'll give it back to you." And with this the therapist attentively follows the patient's eyes, his every move and change of expression.

When the patient seeks the therapist's eyes with a smile, we conclude that he has associated pleasure with the mother surrogate. This conclusion is confirmed by subsequent efforts to touch the therapist. This acceptance of maternal care is the beginning of anxiety-free contact with the outer world. When the patient wakes up fully, he may return to his remote or hostile attitude. However, repetition of these contacts over a period of about 2 weeks establishes a positive relationship between the patient and other persons. This becomes the basis for communication in the succeeding period of reorientation.

Once the patient has begun to accept help and satisfaction from others, we augment his receptiveness to external sources of pleasure, while avoiding overstimulation. The therapist does not confront the patient with difficult reality problems during reorientation. Like the preschool child, he must not be overtaxed. The therapist gives continuous encouragement, sharing walks, treats, games and small errands. Before the patient leaves the hospital, the human contact which we offer will have become indispensable.

Contact is established with close relatives of the patient, individually or in a group, to help them acquire understanding and to prepare them for the patient's homecoming.

Where the environment is too destructive, the patient is helped to accept a new environment.

When he returns to the community, the integrated treatment program continues on an ambulatory basis. The rehabilitation period is often used by the therapist to guide the patient toward realistic changes in his life situation which will prevent a return to passive adaptation. We do not hesitate to become active when necessary: we may aid the patient to find a job and living quarters; we may guide him to educational and social opportunities, or even assist in managing a budget. Being genuinely helpful without magic or omnipotence, the therapist becomes an ally.

With support, the patient learns to meet reality with less anxiety. As he evidences further ability for reality testing, he receives some expression of the therapist's appreciation of his progress. We make use of any common ground to break through the patient's former isolation. Empathy and active advice, however, do not necessitate entering into the patient's problems; after all, our ultimate goal is to render the patient independent. To this end we encourage efforts at selfassertion and critical judgment, although it may be aimed at the therapist. In therapy the patient often realizes for the first time that disagreeing does not destroy an established relationship. Once convinced of this, he can permit himself to differ from important people and from the rules of his early training, instead of retreating into hostile remoteness.

A valuable means for promoting ego strength is identification with a group, either in an activity program or in group psychotherapy. As soon as the patient begins an active search for companionship and gratification, his choice and judgment are watched and at times supervised to exclude real danger.

Progress and growth during rehabilitation are rarely smooth or continuous and are met with flexibility in techniques. Above all, the therapist with his knowledge of the usefulness of EN can recognize the need for maintenance treatments to assure uninterrupted reality contact without excessive anxiety or acting-out.

Acceptance in this re-educational period of psychotherapy is tempered with firmness in which the therapist's integrity holds up in spite of testing pressures from the patient. Pressures stemming from emerging impulses are dealt with by interpretation. Once the transference has been firmly established, the patient is helped to become more aware of his emotions. His clinging to old ways of reacting is interpreted, while therapy encourages him to recognize and seek satisfaction for his present day needs. This marks the beginning of insight psychotherapy.

Insight psychotherapy with the recovering psychotic patient differs somewhat from that used with the neurotic patient. The therapist is not simply a passive reflector and objective interpreter of the patient's past and present conflicts; but remains ready to intervene actively to prevent too high a level of anxiety by shifting as necessary from passivity to active alliance with the patient.

SUMMARY

The psychotic patient, no matter what his underlying character structure may be, reacts against deprivation with the defense of a break with reality. Intensive EN quickly produces a state in which gratification of infantile needs becomes the basis for reality contact. While reality contact is sustained with maintenance EN, re-education leads to a secure basis for restructuring psychotherapy. This, in turn, makes the defensive break with reality unnecessary.

BIBLIOGRAPHY

1. Alexander, L. *Med. Clin. N. Amer.*, 38: 1363, 1954.
2. Arieti, S. *Interpretation of Schizophrenia*. New York: Brunner, 1955.
3. Fenichel, O. *The Psychoanalytic Theory of Neurosis*. New York: W. W. Norton, 1945.
4. Freud, S. *The Problem of Anxiety*. New York: Translation by H. Bunker. The Psychoanalytic Quarterly Press and W. W. Norton, 1936.
5. Fromm-Reichmann, F. *Principles of Intensive Psychotherapy*. Chicago: University of Chicago Press, 1950.
6. Glueck, B. C. Regressive electroshock therapy. Meeting of Amer. Psychiat. Society, May 9, 1955.
7. Medlicott, R. W. *New Zealand Med. J.*, 53: 128, 1954.
8. Secheyay, M. A. *Symbolic realization*. New York: International University Press, 1952.
9. Bogen-Tietz, E., and Bogen, J. E. *The history*

of electronarcosis. Soc. Internat. Hist. Med., Proceedings. Roma-Salerno 13-20 Settembre 1954, 1956.

10. Bogen-Tietz, E., and Grotjahn, M. J.A.M.A., 145: 1055, 1951.

DISCUSSION

DR. BERNARD C. GLUECK, JR., M. D. (Minneapolis, Minn.).—The technique described by Dr. Bogen-Tietz, using daily electronarcosis treatments, appears to produce changes in the psychological organization of the patient and in his physiological responses similar to those observed in patients treated with the technique first described by Milligan in 1946, which involves the use of 3 electroconvulsive treatments per day on a daily basis. The stages of change described by Dr. Tietz correspond remarkably with those observed using 3 convulsions a day rather than 1 convulsion followed by some minutes of electrostimulation. It is interesting to speculate upon the changes in the brain which lie behind the psychological and physiological changes observed in the patient.

We have been concerned with investigating this problem during the past year, and at the present time are looking into the general thesis that the electric current and the convulsive seizure produce a marked vasoconstriction of all of the blood vessels supplying the brain. In the ordinary convulsive treatment this lasts from 40 seconds to perhaps as much as 3 or 4 minutes, usually followed by a marked vasodilation. Perhaps with the convulsive seizure followed by electrostimulation, the vasoconstriction persists during the entire period of the stimulation, resulting in a much longer period of diminished blood supply to the brain than with the usual electroconvulsive seizure. We are working on the premise that this vasoconstriction produces some type of deprivation to the cortical cells which is responsible for a shift in metabolism of the brain tissues. That this may be related to the rather marked physiologic, as well as psychologic changes in the patient, remains to be demonstrated, but appears to be a promising line of investigation.

However these changes may be produced, the very rapid shift from a state of chronic tension and anxiety, with its various physiologic and psychological manifestations, to a state of relative homeostasis marked by freedom from anxiety, and a shift in the physiologic state to a more nearly normal situation, is extremely impressive. It leads one to the conclusion, which may perhaps be wishful thinking, that we are able to reverse quite rapidly, through the use of these techniques, the destructive effects of the chronic anxiety and tension

that appear to be part of the psychotic process. The memory impairment described by Dr. Bogen-Tietz, which in the 3-times-a-day convulsion technique is a complete amnesia lasting for 7 to 14 days, may be involved in the therapeutic response. It does not appear, however, to be the destructive, interfering, to-be-avoided-at-all-costs, kind of result of the electric stimulation of the brain that has been ascribed by many clinicians to these techniques. The memory loss has also led to serious criticism of any electrostimulating procedures, since this was interpreted as representing serious brain damage, and also was supposed to produce marked interference with any kind of psychotherapy following treatment. Dr. Bogen-Tietz has described a marked facilitation of psychotherapy following this type of treatment. Our own experience confirms this finding. Not only is the increased accessibility described by Dr. Bogen-Tietz an important part of the pattern, but we have found a consistent improvement in the recovery of early memories that were previously repressed. This is one of the results of treatment most commonly referred to by our patients. They contrast the sharp improvement in the recovery of remote events with the difficulty in recent memory. It has resulted in our being able to construct far more accurate psychodynamic formulations in terms of early life experiences, and has helped the patient to integrate the early traumatic experiences with the behavior patterns of the adult years.

There appears to be one difference in the results of the electronarcosis and the standard electroconvulsive method in that we find a persistent amnesia for the events immediately preceding the treatment, with the retrograde period being determined apparently by the duration of the acute psychotic process. This may be anything from several weeks to as long as 1 to 2 years.

I would like to re-emphasize Dr. Bogen-Tietz' contention that the rapid interruption of the psychotic process is of tremendous therapeutic importance, both from the standpoint of relieving symptoms at the earliest possible moment in order to facilitate contact with the patient, and also to prevent the patient from using over and over again the processes of miscarried repair that are the hallmark of the psychotic break and the failure of reality adaptation. I believe that Dr. Bogen-Tietz has made a very important contribution to our treatment of the psychotic patient, and am hopeful that this sort of experimentation with variations in the application of electric current to the brain will continue, since we have, as yet, no uniformly satisfactory approach to the problems presented by the many varieties of psychotic disturbance that we are daily called upon to treat.

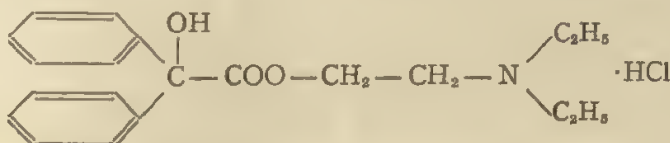
CLINICAL NOTES

OBSERVATIONS UPON THE THERAPEUTIC USE OF BENACTYZINE SUAVETIL¹

VERNON KINROSS-WRIGHT, M.D., AND JOHN H. MOYER, M.D.²

Benactyzine is an anti-cholinergic drug first made in 1936 by the Ciba Laboratories, with the following formula:

Clinical results achieved by Jacobsen, Munkvad and others in many hundreds of patients in Denmark indicate 50-80% im-



Benzilic Acid Diethylaminoethyl Ester HCl

Jacobsen and his co-workers in Denmark studied Benactyzine and a number of related compounds on the assumption that an excess of acetylcholine in the nervous system might underlie certain types of emotional illnesses. Pharmacologically, the drug resembles atropine though less potent in its peripheral parasympatholytic effects. There is but little effect upon the blood pressure and little or no sedation. It has pronounced local anesthetic activity. Central effects of the compound have been carefully explored by Jacobsen in a series of animal and human experiments. Utilizing a modification of Masserman's technique, he found that the drug would abolish the characteristic behavior in a conflict situation. Signs of stress in animals conditioned to an escape response were minimized; simultaneously their responses became faster and better coordinated.

In man, Benactyzine (in larger than therapeutic doses), according to Jacobsen, produces dizziness, relaxation of the musculature, thought blocking with reduction in spontaneous associations; and some tendency to lose the train of thought, complete or partial suppression of the alpha rhythm in the electroencephalogram, and a reduction in autonomic response to emotional stress.

Improvement in neurotic patients. Anxiety reactions and compulsive states were most influenced while there was little influence upon schizophrenic, hysterical or depressive conditions. Side-effects were transient and included peripheral atropine-like effects and occasional unmotivated mirth. Munkvad used as much as 90 mg. daily in psychotics without improvement. The average dose, however, for neurotic patients was 3-10 mg. daily.

Substantially similar results have been reported by Davies and others from England. These British writers have been more concerned though about the bad effects of the drug upon attention, thinking and judgement.

We were impressed by the Danish reports and decided to give Benactyzine a clinical trial early in 1956.³ Seventeen normal volunteers were given 1-5 mg. of the drug in a single dose. With the larger dose, heaviness of the limbs, dilatation of the pupils, euphoria and some distortions in the perception of the passage of time were noted. Two of the subjects noted difficulty in organizing their thoughts and keeping track of what they were saying. Ten of the subjects (on 1 mg. dosage) were not able to distinguish the drug from an identical placebo taken in the same experiment.

¹ Benactyzine is sold under the name of Suavetil in Denmark and England.

² From the Departments of Psychiatry and Pharmacology, Baylor University College of Medicine, Houston, Tex.

³ Benactyzine was kindly supplied by Smith, Kline & French Laboratories, and Lloyd, Dabney & Westerfield.

Over 70 patients have received Benactyzine though only the first 42 are considered in this report. The patients were all treated in the outpatient clinic and included representatives of the various types of psychoneuroses as well as a few depressions and two schizophrenics. Dosages varied from 3-16 mg. a day in divided doses for periods up to 12 weeks. No attempt was made to establish controls in this preliminary study and some of the patients were receiving concurrent psychotherapy. A number, however, were given identical placebos without their knowledge for varying periods during treatment. In most cases the patient could readily distinguish these from the active drug largely because of lack of side-effects. However, some claimed satisfactory relief from placebo. Of our patients about one-third were greatly improved by both objective and subjective criteria; one-third obtained some benefit and the remainder were unchanged or worse.

Side-effects were infrequent with doses of less than 4 mg. daily. With 4-8 mg. atropine-like effects of dryness of mouth, pupillary dilation, slight palpitations and also occasional difficulty in concentration were noted by a number of patients. In doses above 8 mg. daily these symptoms were noted by one-half of the patients with the addition in some of nausea, anorexia, and constipation. Those taking 12 mg. daily or more were often considerably bothered by heaviness of the limbs, feelings of mental confusion (subjective), emotional lability and feelings of unreality and drowsiness. Dizziness and

ataxia were found in some. One patient developed a maculo-papular skin rash. The high incidence of side-effects, particularly the impairment of thinking, caused many patients on the higher dosage to request discontinuance of Benactyzine.

A good clinical response was associated with a calming effect without undue sedation. This was especially noteworthy in the face of formerly stressful emotional situations. We did not observe major changes in neurotic patterns of thinking or behavior. Most were less bothered by the autonomic concomitants of anxiety than formerly, except where side-effects coincided with these. A small number of patients reported their anxiety aggravated by Benactyzine, apparently the result of feelings of depersonalization and lightheadedness.

Comments: Benactyzine produces some interesting and sometimes therapeutically useful effects upon emotionally disturbed patients. Its greatest value appears to lie in the reduction of emotional reactivity to stress. In our hands the drug has not achieved the highly favorable results reported in the Danish and British literature. The incidence of uncomfortable side-effects in our patients has been considerable. It is almost superfluous to comment that the evaluation of any drug offered for the treatment of psychoneuroses requires precise and controlled research design. We report these preliminary observations because of the considerable interest that this compound has aroused in the United States.

THE DUAL ACTION OF THE TRANQUILIZERS

JOSEPH A. BARSA, M.D.¹

A tranquilizer, in contrast to the "older" sedatives like the barbiturates, is defined as a drug which calms the emotions without affecting mental acuity. Truitt has classified the drugs chemically into 4 main groups, as follows: 1. Rauwolfia alkaloids, of which reserpine is the most important; 2. Phenothiazine derivatives, such as chlorpromazine (Thorazine), promazine (Sparine), promethazine (Phenergan), mapazine (Pacatal), prochlorperazine (Compazine); 3. Pro-

panediol dicarbamate or meproamate (Miltown, Equanil); 4. Diphenyl methanes, of which the most important are azacyclonol (Frenquel), benactyzine (Suavetil), hydroxyzine (Atarax).

It is used to be thought that the tranquilizing effect or calming effect was the principle therapeutic action of these drugs, and that it was this which operated both in allaying the anxiety of the neurotic and in allowing the schizophrenic to shed his delusions and hal-

¹ Rockland State Hospital, Orangeburg, N. Y.

lucinations. In other words, if the anxiety of the schizophrenic were truly relieved without reducing mental acuity, there would be no further need for delusions and hallucinations which have been considered by some as defenses against anxiety.

However, judging from my own clinical experience I believe that there are two separate and distinct effects of these tranquilizers—a tranquilizing effect which calms the patient, and, (for want of a better term) an anti-psychotic effect which combats the delusions and hallucinations of the schizophrenic. These are separate and distinct effects, for one can occur without the other. For example, I have on occasion treated rapidly an actively psychotic schizophrenic with such large doses of reserpine that the patient has become first lethargic, later mentally confused, and finally even semi-comatose. I have then withdrawn the drug, and, on regaining his alertness, the patient has been in a remission of his psychosis, this remission remaining for many months. Certainly the remission was not produced by a tranquilizing effect as I have defined it. Furthermore, in treating a schizophrenic with reserpine or one of the phenothiazines, we sometimes leave him with considerable (at times increased) tension and anxiety, even though his delusions and hallucinations may have disappeared. On the other hand, it is possible to obtain what is apparently a truly tranquil-

izing effect without eliminating the delusions and hallucinations. This is most common with meprobamate which is one of our best tranquilizers, but which has a negligible anti-psychotic effect. Thus, the tranquilizing and anti-psychotic effects in these drugs can be considered separately and evaluated separately. We can, therefore, list the 4 groups of tranquilizers in the order of their tranquilizing effectiveness as follows: meprobamate, phenothiazines, Rauwolfia, and diphenyl methanes. But in the order of their anti-psychotic effectiveness they are: phenothiazines, Rauwolfia, meprobamate and diphenyl methanes. It should be noted that the above listings are based on the average response of patients, and it does not preclude individual exceptions.

Does all of this mean that the tranquilizers act on one cerebral center for their tranquilizing effect and on another for their anti-psychotic effect? Perhaps. Further research must be done in this area.

Does this also mean that the tranquilizing drugs in their anti-psychotic effect strengthen the patient's ego structure? Definitely not. When a schizophrenic is in remission as a result of drug therapy he is just as liable to plunge again into psychosis unless the ego is protected by a maintenance tranquilizing effect of the drugs, or, better still, unless the character structure is changed and strengthened by intensive psychotherapy.

CORRESPONDENCE

ELECTROSHOCK THERAPY

Editor, THE AMERICAN JOURNAL OF PSYCHIATRY:

SIR: We wish to confirm the advantages of the method of treatment described by D. J. Impastato in The American Journal of Psychiatry, 113: 461, 1956.

Impastato does not use barbiturates before electro-convulsive treatment, but only 10 mgms. of succinylcholine. He follows it 10 seconds later with a *petit mal* electro-convulsive stimulation and 20 seconds later with the usual *grand mal* stimulation. He has used it till now in 100 cases.

This method, first introduced by one of us 2 years ago when working with Dr. S. V. Marshall as anaesthetist, has been used by us for all patients needing relaxants over the past 18 months. We have successfully used it till now in about 3500 treatments and never once used pentothal.

Our method only slightly varies from the method described. We are using the Minecta Electrotherapy Unit with Electronic Timing and automatic glissando. The voltage ranges from 80-140V, the timing from 0.5-2 seconds, the muscle relaxant used is Brevidil E.

Patients are given sodium amytal gr. 3 to 6 an hour before treatment in order to decrease the apprehension which psychiatric patients feel for any strange procedures. The sub-convulsive stimulation (80-90V 1 sec) if given at the correct time and repeated if necessary, causes complete amnesia for any

unpleasant accompaniments of the relaxant. We have found that it is wise to give the first subconvulsive stimulus 10 seconds after the injection of the relaxant and to repeat the stimulus if the onset of relaxation appears to be at all delayed. Inhalation of oxygen by the patient during injection and up to the time of the first stimulus lessens the danger of any unpleasant preliminary sensation. Oxygen is also administered under pressure after the cessation of the "convulsion" until respiration is fully established. We consider this essential in order to avoid any anoxaemia, and clinical impression is that this avoids confusion especially in elderly patients.

In some cases inflation with oxygen before treatment is all that is needed to eliminate the subjective feeling of oppression or suffocation, and no subconvulsive stimulation is necessary.

This method successfully eliminates the necessity for intravenous barbiturates, not only shortening and simplifying the procedure, but also eliminating the complications which have occasionally followed the injection of pentothal.

We are therefore in full agreement with Impastato's conclusions and advocate elimination of pentothal from electro-convulsive therapy.

A. T. EDWARDS, M. B. B. S. (Syd.),
I. A. LISTWAN, M. B. B. S. (Syd.),
Sydney, Australia.

REPLY TO THE FOREGOING

Editor, THE AMERICAN JOURNAL OF PSYCHIATRY:

SIR: I was very glad to be informed that Drs. Edwards and Listwan have used this method of treatment in over 350 patients successfully and that they feel as I do that it is best not to administer intravenous barbiturates to patients undergoing electro-convul-

sive therapy. It is still my opinion that the technic described is the safest, simplest and best one so far devised for electroshock therapy.

The only complication of the treatment is that a fairly good number of patients develop some anxiety. Although the incidence of anxiety is not greater than that developed by

patients receiving unmodified electro-convulsive treatment, it is still a problem and should be avoided as much as possible. We are presently studying this problem. I was, therefore, very glad to learn that Drs. Edwards and Listwan, in order to diminish the anxiety, use sodium amytal by mouth one hour before treatment and preoxygenate the patients just prior to the treatment. I have already tried

the suggestion of preoxygenating the patients before treatment and so far find it very useful.

Drs. Edwards and Listwan should be congratulated, *inter alia*, for their modifications which apparently diminish the anxiety and enhance the usefulness of the technic.

DAVID J. IMPASTATO, M. D.,
New York City

COMMENT ON LETTER FROM DRs. EDWARDS AND LISTWAN

Editor, THE AMERICAN JOURNAL OF PSYCHIATRY:

SIR: With my approval Drs. Edwards and Listwan have mentioned my name in their letter regarding the method described by Dr. Impastato, because as anesthesiologist I was associated with Dr. Edwards in his earlier trials of this new method, which he considers to be superior to the usual sequence of thiopental and succinylcholine (SCC) for the purpose under consideration. May I hasten to state that, after an experience of some 15,000 applications of the latter combination during the past 7 years, I must disagree entirely with the conclusions reached by Drs. Edwards and Listwan in this connexion. So too, apparently, with Dr. Impastato.

In my opinion it is nothing short of miraculous if Dr. Impastato was able to get adequate relaxation with only 10 mgms., or less, of SCC acting over a period totalling 30 seconds. Employing the usual technic my present conclusions are that SCC requirements generally range between 15 and 65 mgms., and that such dosages must be allowed from 60 to 90 seconds to act fully before the *grand mal* stimulation is given, depending on the build, health, age, etc., of the patients concerned. Only thus may truly efficient modification of the convulsion be obtained in all cases, and yet ensure the restoration of normal breathing almost immediately afterwards. Of course artificial respiration with oxygen by means of a Waters' 'bag-and-mask' outfit must be practised both before and after the *'grand mal'* EST stimulation under these circumstances, especially in aged and cachectic subjects. Some psychiatrists affect to despise the use of oxygen in

this manner, and claim that the brief period of apnea following their particular mode of EST is of no consequence. Any competent anesthesiologist, and even anesthetist, knows that any hypoxia, no matter how brief, can damage the ageing brain or heart, sometimes irreparably. Much later confusion and disability, and even untimely death, can be traced back to such neglect to provide adequate lung ventilation and tissue oxygenation during any period of physical stress or impaired respiration. Obviously the efficient giving of oxygen should be an invariable routine in all applications of EST, no matter how healthy the patients might appear to be.

To avoid thiopental on the rather specious grounds that this omission obviates danger, and to give instead a *'petit mal'* EST stimulation only 10 seconds after the relaxing agent, followed in a further 20 seconds by a *grand mal* stimulus, must deprive the procedure of its chief object of preventing traumatic complications. It seems to me that this egregious device has only two advantages; first, cheapness, and second, that by 'going through the motions' of modifying the therapy the operator is merely protecting himself against future legal hazards. To argue that the avoidance of thiopental and the services of an anesthetist reduces the dangers of the treatment is indeed a telling commentary on the general state of anesthesia in the United States of America. It also reflects gravely on the physiological knowledge of the psychiatrists, of whatever country.

To my mind, that of a mere anesthesiologist, the 'no-thiopental' method is based on the false premiss that the preliminary use of thiopental is always dangerous, whereas this is not so when its application is under rea-

sonably expert control. Further the restriction of SCC to virtually ineffectual dosages might also be thought to widen the safety-margin. May I submit that both of these contentions are fallacious, the prevalence of which fallacies indeed do make some psychiatrists chary about using the ordinary sequence. With proper facilities and in competent hands, however, the standard method is eminently satisfactory to both operator and subject alike, while its safety for all cases under similar conditions is quite unquestionable.

As for the 'no-thiopental' device, it is inelegant; it does not effectually suppress the patients' apprehensions, and it favours undue restlessness afterwards. Even if it might

permit a more speedy restoration of animation, this is not infrequently of delirious character. The thiopental/SCC sequence, well-conducted, is far superior in almost all respects, and there is practically no reason why any intelligent psychiatrist, who wants to save his patient the expense of an anaesthetist, should not be able to learn and conduct safely this valuable technic either for himself or for one of his colleagues.

As one who prefers simplicity whenever possible I must, with some regret, oppose the advocacy of Drs. Edwards and Listwan for the elimination of thiopental from electroshock therapy.

S. V. MARSHALL, M. B., Ch. M.,
Sydney, Australia.

HIGH COST OF ANALYTIC TRAINING

Editor, THE AMERICAN JOURNAL OF PSYCHIATRY:

SIR: The revelations of Potter, Klein and Goodenough (Am. J. Psychiat., 113:11, May 1957) raise interesting questions regarding the proportion of a professional specialist's life that should be spent in formal education. For those who harken to the "Sound of a Distant Dream," pity would be insulting, but the plight of their families cannot fail to arouse sympathy.

Possibly psychoanalytic training could be budgeted for in retirement insurance pro-

grammes. At all events, the whole question of how far the will o' the wisp of complete self knowledge should be pursued bears energetic ventilation among psychiatric educators and students.

Those of us who were able to take at least our residency training in institutes where we could study our patients and books with reasonable leisure and security have a great deal to be thankful for.

L. R. MUNDY, M. D.,
Hartford, Conn.

VERITAS

The *Moone* hath her *spots*, and the greatest men have their *failings*. No man is free from error in this life. Truth could never yet be *monopolized*; the great merchants of spiritual *Babylon* have not ingrossed it to themselves, nor was it ever tyed to the Popes *Keyes*, for all their brags: The God of truth send us a time wherein mercy and truth may meet together, righteousness and peace may kisse each other. *Amen*.

—ALEXANDER ROSS,
*Animadversions upon Sir Kenelm
Digbie's Observations on Religio
Medici* (1645)

COMMENT

THE CHICAGO MEETING

The 113th annual meeting of The American Psychiatric Association was held in Chicago, Illinois, at the Morrison Hotel, May 13 through 17, 1957. All sessions took place at the Morrison Hotel excepting some of the round table conferences that were assigned to the Sherman Hotel. The official opening was held in the Terrace Casino on Monday, May 13, and was called to order by the President, Dr. Francis J. Braceland, at 9:15 a.m. The Invocation was given by Rev. W. J. Devlin, and The Association was welcomed to Chicago by Dr. Roscoe Miller, Dean of the School of Medicine of Northwestern University. Dr. Braceland introduced President-elect Dr. Harry C. Solomon, who responded briefly thanking the membership for bestowing this great honor upon him. This was followed by the tenth annual report of the Medical Director, Dr. Daniel Blain, in which he reviewed the highly important activities of the central office during the past year. Dr. Matthew Ross, Speaker of the Assembly of District Branches, reported on the achievements and progress of this body which was organized in 1953. The Chairman of the Committee on Arrangements, Dr. Hugh T. Carmichael, presented the report of the exceptionally well-planned and successful organization of the various functions of the annual meeting. He emphasized the fact that the entire membership of the Committee contributed materially to the planning and that an outstandingly attractive program for entertainment for the ladies was organized by the Ladies Committee, with Mrs. D. Louis Steinberg as Chairman. Dr. Titus H. Harris, Chairman of the Program Committee, reported on the composition of the program, which consisted of 132 scientific papers and 30 round table conferences. The Secretary reported the official membership statistics stating that as of March 31, 1957 the total was 9,205. The Treasurer presented his report on the present financial status of the Association. The Hoiheimer prize was presented to Dr. Christoph M. Heinicke of

Portland, Oregon, for research done in London, England and reported in the monograph, "Effects of Separating Two-year Old Children from Their Parents: A Comparative Study." The Isaac Ray award was presented to Dr. Manfred S. Guttmacher of Baltimore, for his outstanding contribution to the better understanding between psychiatry and jurisprudence. The Mental Hospital Achievement silver plaque awards were then announced by Dr. Daniel Blain and will be presented this Fall to the Saskatchewan Mental Hospital, Weyburn, Sask., Canada, and to the Receiving Hospital, Detroit, Michigan. Honorable Mentions were given to the Northern State Hospital, Cedrowoolley, Washington, and the Madison State Hospital, Madison, Ind. Election of new members and Fellows took place at this session and this made it possible to hold the convocation for newly elected Fellows at a highly impressive and dignified session on Tuesday morning. The number of newly admitted members was 667, broken down as follows: 341 associate members, 313 members, 2 reinstatements, 11 corresponding Fellows.

The highlight of this opening session was the address by the President. It was a most thoughtful, comprehensive and inspiring message in which Dr. Braceland reviewed the present status of psychiatric practice and research and the guiding principles of continuing the progress of the Association. The President-elect, Dr. Harry C. Solomon, responded warmly and appreciatively to the presidential address. The Benediction was given by Reverend Donald Cox, Chaplain of Kankakee State Hospital.

The next business session for the membership was called to order by the President on Tuesday morning, May 14. The Board of Tellers reported the results of the ballots both for the election of officers and the vote on the amendments to the Constitution and By-laws. The total number of ballots mailed was 7,200; 4,398 ballots were returned, 28 of which were invalid. The officers elected for 1957-1958 were as follows: Dr. Francis J.

Gerty, President-elect; Dr. William Malamud, Secretary; Dr. Jack R. Ewalt, Treasurer; incoming councillors: Dr. C. H. Hardin Branch, Dr. Addison M. Duval, and Dr. Jacques Gottlieb. The proposed amendment to the Constitution to provide the establishment of two newly elected officers to be known as Vice-presidents, drew a vote of 3,755 in favor, 146 opposed, and 48 invalid ballots. The result of the vote to amend the By-laws was 3,752 in favor, 146 opposed, and 48 invalid ballots. Reports were then presented by the Coordinating Committee Chairmen to review the activities and plans for their respective Standing Committees. Dr. Wilfred Bloomberg reported for the Committees on Professional Standards, Dr. Frank J. Curran for the Committees on Technical Aspects of Psychiatry, and Dr. William C. Menninger reported for the Committees on Community Aspects of Psychiatry. Following the business session and after a brief recess, the second annual convocation ceremony honoring newly elected Fellows was held in the Terrace Casino, at which Dr. Solomon presented a reading on "The Objectives of The American Psychiatric Association" and Dr. Francis J. Gerty, the incoming President-elect, spoke on "Fellowship in the American Psychiatric Association." Dr. Braceland welcomed the incoming Fellows and Rev. Edward P. Dickson gave the Benediction.

The program was distinguished in several respects. The Association commemorated at this meeting the 100th anniversary of the birth of Professor Eugen Bleuler who has made such signal contributions to psychiatry. The commemorative exercises were highlighted by the Fellowship Lecture by Dr. Gregory Zilboorg entitled "Eugen Bleuler and Present Day Psychiatry." Bleuler's contribution was discussed in terms of its relationship to the contributions of his two great contemporaries, Kraepelin and Freud. Dr. E. Eduardo Krapf gave a scholarly response to Dr. Zilboorg's provocative address.

The scientific program was organized most effectively by Dr. Titus H. Harris and his committee, and, in keeping with the present trend in psychiatry, contained a large number of contributions to research, ranging all the way from biochemistry and pharmacody-

namics to psychological, psychopathological and social studies. Notable on this program was the first Adolf Meyer Research Lecture which was given by Dr. Stig Akerfeldt of the Nobel Institute, Stockholm, Sweden, on his recent work in the field of "Serological Reactions of Psychiatric Patients to Dimethyl penyline diamine." This was organized by the Program Committee in collaboration with the Committee on Research, and a number of scientists participated in reporting their work in relationship to the results of Dr. Akerfeldt's investigations.

The next business session was held on Wednesday morning, May 15, in the Terrace Casino. The Secretary reported the actions of the Council during the past year which were duly approved by the membership upon motion from the floor. The establishment of a number of new district branches was approved by the membership. Another feature of this program was the presentation of certificates to the retiring councillors and committee chairmen of the Association.

The annual dinner was held also in the Terrace Casino on Wednesday evening, May 15, and was well attended. The highlight of the evening was the presentation of a commemorative framed certificate and silver bowl to Mr. Austin M. Davies, Ph. B. by Dr. Clarence B. Farrar, Editor of the AMERICAN JOURNAL OF PSYCHIATRY, on the occasion of Mr. Davies's twenty-fifth year of dedicated service to the American Psychiatric Association in the capacity of Executive Assistant and to the AMERICAN JOURNAL OF PSYCHIATRY as Business Manager. The presentation of the past-president's medal to Dr. Francis J. Braceland was made by Dr. Kenneth E. Appel.

The final business session was held on Friday morning, May 17, with Dr. Braceland presiding. Dr. Braceland presented the gavel to Dr. Solomon signifying his assumption of the presidency, and the 113th annual meeting was officially closed at 5:00 p.m. on May 17.

The meeting in general stood out as one of the finest in the history of the Association and was eminently successful both scientifically and socially. The total attendance was as follows: members 1,924, non-members 953, complimentary (undergraduate and graduate students) 137, guests 523, and ex-

hibitors 199, a total of 3,736. The success of the meeting was largely due to the great leadership and wise guidance of Dr. Francis J. Braceland, the retiring president, and the harmonious cooperation of the entire membership, officers and committees. Special recognition and thanks should go to those who have helped in making this success pos-

sible, more particularly to Mr. Austin M. Davies, the Executive Assistant, Dr. Blain and Messrs. Robinson and Turgeon of the central office, and members of the staff of both offices as well as the Committees on Arrangements and Program.

WILLIAM MALAMUD, M. D.,
Secretary.

MIND MOLDS

From what I have said, it is clear that I was in the intellectually enviable position of being able to approach these [religious] problems without that conditioning in youth which, for the large mass of Christians, stigmatizes doubts of creed or critical appraisal of doctrine as reprehensible or even sinful; and which automatically inhibits later contemplation except from theologically fixed premises. My mind was not, in the liquid state of childhood, poured into a mold and allowed to harden into one the other of the ingots of Christian denomination which, whatever their minor differences of pattern, all hold through life, unmalleable in the fires of reason, the basic form of unquestioning faith.

—HANS ZINSSER
(The Biography of R. S.)

CREEDS

On every hand, in individual as well as in national life, numberless facts proclaim that human nature is better adapted to the circumstances of existence than to require, under threat of dissolution, the solution of ultimate problems. The revelations that come to man disclose ever proximate goals, and each new step means a new revelation. . . . To have observed that human society generates moral ideals together with impulses and desires to realize them, is, whatever our theories about them, sufficient for practical life. To have gained that knowledge is to have secured ground unshakable by any philosophy. . . .

He has a sufficient living creed who can affirm that moral forces actually come into existence in human society, and that its welfare and the individual's self-approval and self-respect are, as a matter of fact, indissolubly bound with the fulfillment of the moral demands.

—JAMES H. LEUBA,
The Belief in God and Immortality

NEWS AND NOTES

NATIONAL COMMITTEE AGAINST MENTAL ILLNESS, INC., WASHINGTON, D. C. (EXECUTIVE DIRECTOR, MIKE GORMAN).—This Committee has prepared a brochure (45 pp.) containing a great variety of statistical facts regarding mental illness in the United States. Date of compilation: January 1957.

The facts herein are drawn from many reliable sources—national and state agencies, and special surveys and reports. The Biometric Branch of the National Institute of Mental Health of the U. S. Public Health Service cooperated with the Committee in preparing the data here presented. Both clinical and economic aspects of the problem are set forth in figures, also the degrees of efficiency of the various state services, and amounts spent or required for new hospital construction, and personnel increases to care for urgent needs. There is a summary, broken down, of the overall direct cost of mental illness in the country today. This annual cost is estimated at approximately \$4,172,124,955.

There are about 586 mental hospitals in the United States. The average bed shortage is 44%. Of 124 hospitals inspected by the Committee appointed for that purpose by THE AMERICAN PSYCHIATRIC ASSOCIATION, 8 received approval, 31 conditional approval, 85 were below minimum standards.

Approximately \$27,353,000 is being spent on research by state, federal, and other agencies. The results are tabulated by states. Encouraging results of the newer drug treatment are shown in a lowering quite generally of the annual hospital census.

The address of the National Committee Against Mental Illness, Inc. is 1129 Vermont Ave., N. W., Washington 5, D. C.

DEVEREUX DINNER AND PROGRAM.—The 16th annual dinner generously given by The Devereux Foundation in connection with the annual meeting of THE AMERICAN PSYCHIATRIC ASSOCIATION was held in the Grand Ballroom of the LaSalle Hotel, Chicago,

Monday evening, May 13, 1957. Nearly 500 guests were present.

Following the dinner, Dr. Roy Grinker, moderator, introduced Dr. Edward W. Bortz, chief of the medical service, Lankenau Hospital, Philadelphia, and past president of The American Medical Association, who spoke on "Growth and Aging." Dr. Bortz's address was discussed by Dr. Ewald W. Busse, professor of psychiatry, Duke University and Dr. Maurice E. Linden, director, division of mental health, Philadelphia Dept. of Public Health.

NORTH PACIFIC SOCIETY OF NEUROLOGY AND PSYCHIATRY.—The annual meeting of the North Pacific Society of Neurology and Psychiatry was held in the Benjamin Franklin Hotel, Seattle, Wash., April 11-12, 1957. The following officers were elected: president: D. E. Alcorn, M. D., Victoria, B. C.; president-elect: J. W. Evans, M. D., Portland, Oregon; secretary-treasurer: R. M. Rankin, M. D., Seattle, Wash.

THE AMERICAN BOARD OF PSYCHIATRY AND NEUROLOGY, INC.—This Board announces the following schedule of examinations: New York, New York—December 16 and 17, 1957; San Francisco, California—March 17 and 18, 1958.

FIRST CANADIAN MENTAL HOSPITAL INSTITUTE.—For the past 8 years THE AMERICAN PSYCHIATRIC ASSOCIATION has organized an annual national institute for mental hospital and related institutional personnel. Lasting for one week, these Institutes have consisted of seminars and workshops focused on a variety of mental hospital problems. Canadian participation has grown larger each year, and action has now been taken to sponsor a similar meeting in Canada.

Working in co-operation, the APA and the CPA will jointly sponsor the first Canadian Mental Hospital Institute at the King Edward Hotel, Toronto, Ontario, January 20-24, 1958. A planning committee, un-

der the chairmanship of Dr. Mary Jackson, Toronto Psychiatric Hospital, has been set up which is working closely with the provincial directors of the CPA. The Canadian Institute will follow the main lines of its American counterpart and will receive organizational staff assistance from the APA Mental Hospital Service.

Program suggestions, advice and comments should be addressed to Dr. Mary Jackson, c/o Toronto Psychiatric Hospital, 2 Surrey Place, Toronto, Ontario.

DR. GUTTMACHER ISAAC RAY LECTURER.—Dr. Manfred S. Guttmacher, psychiatrist and chief medical officer of the Supreme Bench of Baltimore, Md., is the 6th winner of the \$1000 Isaac Ray Lectureship Award of THE AMERICAN PSYCHIATRIC ASSOCIATION, it was announced at the APA's annual meeting in Chicago. The Award is given annually to a psychiatrist, lawyer or judge for contributing importantly to better understanding between psychiatry and law.

As recipient, Dr. Guttmacher will deliver a series of lectures on psychiatry and the law, under the sponsorship of the Schools of Law and Medicine at the University of Minnesota, in the academic year 1957-1958.

The Award commemorates Dr. Isaac Ray, a founder of the APA, whose remarkable "Treatise on the Medical Jurisprudence of Insanity," published in 1838, was for many years the standard work on the subject.

FOUNDATIONS' FUND FOR RESEARCH IN PSYCHIATRY.—The Foundations' Fund for Research in Psychiatry wishes to announce that October 15, 1957, is the next deadline for the submission of applications for research fellowships and research teaching grants in psychiatry, psychology, sociology, neurophysiology, and other sciences relevant to mental health.

Interested persons and departments are invited to write for details to: Foundations' Fund for Research in Psychiatry, 251 Edwards St., New Haven 11, Conn.

DR. HEINICKE RECEIVES HOFHEIMER PRIZE.—Christoph M. Heinicke, Ph. D., of Portland, Ore., and currently senior research psychologist at the Tavistock Clinic in London, England, is this year's winner of THE

AMERICAN PSYCHIATRIC ASSOCIATION'S \$1500 "Hofheimer Prize" for outstanding psychiatric research, it was announced at the APA annual meeting in Chicago.

Dr. Heinicke's prize-winning research dealt with the effects of separating 2-year-olds from their parents. The research is considered of outstanding merit for the methodology of behavior measurement it developed.

The Hofheimer Prize was established in 1947 in honor of Lieutenant Lester N. Hofheimer of New York City, who lost his life in action in the Mediterranean in World War II.

DR. HOFFMAN DIES.—Dr. Jay L. Hoffman, associate clinical professor of psychiatry, George Washington University Medical School, and first assistant physician, St. Elizabeths Hospital, Washington, D. C., died following a heart attack at the hospital, May 4, 1957. His age was 47.

Dr. Hoffman was graduated in medicine from the University of Pennsylvania in 1934. He served overseas during World War II and attained the rank of lieutenant-colonel. He had charge of a psychiatric clinic in England. Following the War, he was named chief of professional services, Veterans Administration Hospital, New Bedford, Mass. Since 1953, he had been on the staff of St. Elizabeths Hospital, where in cooperation with the National Institute of Mental Health he was engaged in research. He was a fellow of THE AMERICAN PSYCHIATRIC ASSOCIATION and a diplomate of The American Board of Psychiatry and Neurology.

INTERNATIONAL SOCIETY FOR PSYCHOPHARMACOLOGY.—At the recent symposium on Psychotropic Drugs held in Milan, Italy, it was tentatively decided to form an International Society of Psychopharmacology, comprising the disciplines of psychiatry, pharmacology, neurophysiology and psychology. An organizational meeting will be held during the International Congress for Psychiatry in Zurich, Sept. 1-7, 1957. All those interested can obtain further information by writing to Herman C. B. Denber, M. D., Director of Psychiatric Research, Manhattan State Hospital, Ward's Island, New York City 35, N. Y.

JOINT MEETING OF ROYAL SOCIETY OF MEDICINE AND MEDICO-PSYCHOLOGICAL SOCIETY.—Immediately after the International Psychiatric Congress in Zurich, the Royal Society of Medicine and the Royal Medico-Psychological Association have organized a joint Anglo-American Symposium to give the opportunity to many psychiatrists in England to hear a group of eminent psychiatrists from America. This symposium will be held at The Royal Society of Medicine, 1 Wimpole Street, London, W. 1., on Tuesday and Wednesday, September 10 and 11, 1957. There will be both morning and afternoon sessions. Chairmen will be: Dr. R. W. Armstrong, president, R.M.P.A., on Tuesday, and Dr. William Sargant, president, psychiatric section of the R.S.M., on Wednesday.

A *limited* number of tickets will be available on application to: The Registrar, Royal Medico-Psychological Association, 11 Chandos Street, Cavendish Square, London W. 1., England.

ELECTROSHOCK RESEARCH ASSOCIATION.—At its annual meeting in Chicago, May 12, 1957, the Association elected the following officers for the year ending March 31, 1958: Dr. Lothar B. Kalinowsky, president; Dr. George A. Ulett, vice-president; Dr. Paul H. Wilcox, secretary-treasurer; Dr. Ernest H. Parsons (ex-pres.), Dr. William L. Holt, Jr. (ex-pres.), Dr. John D. Moriarty, and Dr. Maximilian Fink, councilors.

The annual prize for the best research paper presented at the scientific session of the Electroshock Research Association in 1957 was awarded to the paper: "Electroencephalographic Studies on the Effects of Electro-convulsive Shock, Experimental Stress and Subcutaneous Injection of Atropine on Adult Albino Rats," by T. Fukuda, J. A. Stern, and G. A. Ulett, St. Louis, Mo.

AMERICAN NURSES' FOUNDATION, INC.—This Foundation, established in 1955 by the American Nurses' Association exclusively for charitable, scientific, literary and educational purposes, has delineated 5 broad areas in nursing research in which investigation is urgently needed. Scholars interested in submitting applications for research projects in this field are invited to send an abstract

of their proposals to The American Nurses' Foundation, Inc., 2 Park Ave., New York, N. Y., by November 1 or March 1 of each year.

N. Y. STATE CRUSADE AGAINST CHRONIC ALCOHOLISM.—A \$168,000 program to attack the problem of chronic alcoholism will be undertaken during the coming year by the New York State Interdepartmental Health Resources Board, it was announced recently. The program will be directed along 4 major lines—education, research, training, and clinical demonstration. There are an estimated 500,000 excessive or problem drinkers in N. Y. State, and the program will encourage physicians, nurses, social workers, educators and teachers, through fellowships of \$300.00 each, to work on community alcoholism programs. This is just one of several projects planned by the Interdepartmental Health Resources Board to deal with alcoholism in N. Y. State.

CHARLES FREDERICK MENNINGER AWARD.—The American Psychoanalytic Association, at its annual meeting at Chicago, May 13, 1957, conferred the first Charles Frederick Menninger award on Dr. Charles Fisher, of the staff of The Mount Sinai Hospital of New York and training analyst of the New York Psychoanalytic Institute.

This annual award for original research in psychoanalysis was established a year ago by Dr. Karl A. Menninger and Dr. William C. Menninger of the Menninger Foundation as a memorial to their father, who was the founder of the original Menninger Sanitarium at Topeka, Kansas.

Dr. Fisher was thus honored in recognition of experimental work on the role of primary modes of perception in dream formation (J. of Am. Psyc. Assoc., Vol. 2, No. 3, 1954; Vol. 4, No. 1, 1956), by which he was able to verify some of the basic theoretical principles originally postulated by Freud in his work on dreams.

NATIONAL LEAGUE FOR NURSING.—At a meeting held under the auspices of the National League for Nursing at the Morrison Hotel, Chicago, May 6, 1957, a special panel dealt with the nursing needs in all cases of long-term illness. It was emphasized that the wide scope of nursing responsibilities now

embrace assistance to the patient and his family with their economic, social and emotional needs, as well as the physical requirements.

MILWAUKEE NEURO-PSYCHIATRIC SOCIETY.—The annual meeting of the Society was held on Wednesday, May 22, 1957. Newly elected officers for the coming year are: president: David Cleveland, M. D., Milwaukee, Wis.; vice-president: Keith Keane, M. D., Sheboygan, Wis.; secretary-treasurer: Edward Carl Schmidt, M. D., Wauwatosa, Wis.; councilors: Isaac J. Sarfatty, M. D., Milwaukee, Wis.; and J. T. Petersik, M. D., Winnebago, Wis.

NEW YORK BUILDS STATE MENTAL HOSPITAL.—Plans have been made for the first new mental hospital to be built by N. Y. State in 25 years. The \$70,000,000 institution, to accomodate 3,000 patients, is to be located in the Bronx, adjacent to the Albert Einstein Medical Center, the East Bronx General Hospital, and the East Bronx Tuberculosis Hospital.

According to operating plans outlined by Dr. Paul H. Hoch, Commissioner of Mental Hygiene, the hospital will serve the Bronx and its residents, providing both inpatient and outpatient care, including the new day hospital type of service, where patients spend the day participating in a regular therapeutic program and return to their homes at night.

The hospital will work in cooperation with the Albert Einstein College of Medicine, providing for the college resources for psychiatric teaching material and availing itself of the consultant services offered by the school's highly qualified specialists. It will be staffed with its own full time psychiatrists.

The Department of Mental Hygiene has worked closely with the architects on plans for the various buildings, which are based upon research into modern mental hospital construction, and incorporate a number of new features. All of the planning has been flexible to accomodate new developments in treatment.

The hospital will operate a school of nursing offering a complete 3 year basic course, and affiliate training for general hospital students.

STATUS AND IMPROVEMENT OF CLINICAL DRUG EVALUATION REPORTS.—A 22-page report has been issued on the proceedings of the working conference held by the recently established Psychopharmacology Service Center of the National Institute of Mental Health. The conference, held at Washington, D. C. in January was arranged in collaboration with THE AMERICAN PSYCHIATRIC ASSOCIATION.

The major purpose of the conference was to review the problems related to the reporting of clinical psychiatric drug evaluation studies and to consider the ways in which reports might be made more informative and useful. To this end, 5 committees were formed: 1. Patient Selection and Description; Chairman, Harry Freeman. 2. Evaluation of Change; Chairman, Ivan F. Bennett. 3. Description of the Treatment Setting; Chairman, Jay L. Hoffman. 4. Drug Therapy and Toxicity Reactions; Chairman, Heinz Lehmann. 5. Editors; Chairman, Roy P. Grinker.

A recommendation was made to establish a new journal to publish works concerning drugs used in the treatment of psychiatric illness and whatever clinical data are developed from pharmacological techniques applied to mental illness.

For further information, write to Jonathan O. Cole, M. D., Chief, Psychopharmacology Service Center, National Institute of Mental Health, Bethesda, Md.

NEW JERSEY NEURO-PSYCHIATRIC INSTITUTE.—The Edward Strecker Building at the N. J. Neuro-Psychiatric Institute, Princeton, N. J., was formally dedicated June 28, 1957, as announced by Dr. Robert S. Garber, medical director of the Institute. The building is named in honor of Dr. Strecker, Emeritus Professor of Psychiatry, University of Pennsylvania. Dr. Strecker serves as consultant to the Surgeons General, U. S. Army and U. S. Navy, and has also served as consultant to the Secretary of War for the Army Air Force. He has been recently appointed as the first professor of psychiatry at the Seton Hall College of Medicine and Dentistry, Jersey City, N. J.

Dr. Lauren H. Smith, physician-in-charge and administrator, Institute and Department for Mental and Nervous Disease, Pennsyl-

vania Hospital, Philadelphia, made the principal address at the dedication ceremony.

The new building will include a small unit for short-term treatment, another for longer-term treatment, and an outpatient division for 50 patients. The objective is a vitally improved service in the field of community mental health.

FIRST AMERICAN CONGRESS OF LEGAL MEDICINE AND LAW-SCIENCE PROBLEMS.—

Dr. Hubert Winston Smith, director of the Law-Science Institute, The University of Texas, has announced the "First American Congress of Legal Medicine and Law-Science Problems" to be held at the Hotel Morrison, Chicago, Monday, July 8-20, 1957, for benefit of lawyers and physicians concerned with personal injury problems. The effort is the most ambitious one of its kind ever undertaken in an English-speaking country. It will feature 165 distinguished lecturers, drawn from the ranks of top medical specialists and trial lawyers. Each week the registrant may take a complete Basic Course or an Advanced Course without substantial duplication of instruction between the two weeks.

The Congress is an attempt to bring the authoritative medicine of the clinic and hospital into the arena of the Law by providing much-needed criteria of proof and instruction in the field of medicolegal trial technique. Each person registering for the course will be eligible to count the hours toward a Master of Law-Science Degree to be awarded by the Law-Science Academy of America. This will be the first time in history that lawyers and physicians have been able to work toward a common degree, based upon inter-relations of Law and Science.

FIRST NATIONAL HEALTH SURVEY.—In May Public Health Service interviewers commenced a nation-wide survey of selected households in every state to obtain data regarding the amount of accidents, hospitalization, and medical and dental care occurring in the families and the length of time that the persons involved have been prevented from carrying on their occupations.

An average of 3,000 households will be visited per month, and the final statistics will be published for the nation as a whole, and

for each of the 11 established geographic areas. The report will supply physicians, research workers, insurance companies and hospital personnel with urgently needed facts on the health of the general population.

BIBLIOGRAPHY OF GROUP PSYCHOTHERAPY.—A comprehensive bibliography of published papers and books on group psychotherapy has recently been issued by the Beacon House Press, Box 311, Beacon, N. Y., edited by Raymond J. Corsini and Lloyd J. Putzey, and covering the years 1906 to 1956.

This new compilation supersedes the first published bibliography in the field of group psychotherapy by Dr. Joseph I. Meiers, issued in 1945.

PSYCHIATRIC GLOSSARY.—The American Psychiatric Association Committee on Public Information has recently published a 48-paged psychiatric glossary of terms in an effort to transpose the technical terminology of psychiatry into popular language. Dr. Henry P. Laughlin, a member of the committee assembled a collection of terms, which the Committee subsequently defined in simple language. It is hoped that the glossary will aid reporters in presenting information about psychiatry to the general public, and clear up widespread misconceptions about psychiatric words and concepts.

The new A.P.A. glossary is the first of its kind since the publication of Richard H. Hutchings *Psychiatric Word Book* in 1930. Copies may be obtained from the Washington office of the A.P.A. for \$1.00.

PSYCHIATRIC RESEARCH REPORTS No. 6.—Papers presented at the Western Regional Research Conference of the A.P.A. held in Los Angeles January 26-27, 1956, are now available in printed form from the Washington office of the A.P.A. These papers were arranged around the general topic, "Application of Basic Science Techniques to Psychiatric Research" and are edited by Dr. Robert A. Cleghorn, Montreal. The topics of individual papers cover a wide range, from the strictly laboratory type of investigation to the clinical to the behavioristic sciences as represented by investigations of the whole animal organism.

OFFICIAL REPORTS

COORDINATING COMMITTEE ON THE TECHNICAL ASPECTS OF PSYCHIATRY

This report to the membership of the A.P.A. May 14, 1957, covers the highlights of 8 Committees on the Technical Aspects of Psychiatry. All these committees met last fall. Seven met again earlier this week, and the eighth committee had a special meeting in March. In addition, the chairmen of these 8 committees have met as a group to discuss mutual problems and to plan overall strategy, to coordinate their work with that of other committees of the Association.

A very brief report of the activities of each Committee prior to the May 1957 meeting follows:

I. *The Committee on Aging*; Ewald W. Busse, Chairman, had its first meeting in October 1956. Plans were formulated to include an evening round table discussion during the annual meeting devoted to the "Psychiatric Aspects of Aging, Prevention and Treatment," and a symposium concerned with the problems of aging. A questionnaire was distributed to the members of the A.P.A. via *The Mail Pouch* to determine the extent of interest and activities among the members in this field. Approximately 1,100 questionnaires were returned indicating considerable interest. The data so obtained are being analyzed and the results will be available at an early date.

Acting upon a specific request, attention is being given to the collection of information as to requirements for the care of the aged in mental hospitals. The committee will cooperate with the editorial staff of *Mental Hospitals*, anticipating that an issue of this publication will be devoted to this complex subject.

II. *The Committee on Child Psychiatry*: George E. Gardner, Chairman. "During the past year this committee has been working in two areas: 1. that of residence inpatient psychiatric treatment of children; 2. the rotational training program in child psychi-

atry for fellows in training in general psychiatry.

The Committee has met with the Committee on Medical Education and are about to make recommendations to the Council regarding block or concurrent training programs for fellows in training in general psychiatry who wish to obtain orientation and education in the children's field."

III. *The Committee on the History of Psychiatry*: Robert S. Bookhammer, Chairman. "In addition to our meeting in the fall of 1956, our committee also had a meeting on March 9, 1957. Our several committee members have been working throughout this year on a joint project and there is still work to be done in preparation for the exhibit on Historical Landmarks in Research in Schizophrenia in the United States, to be presented at the International Congress on Psychiatry in Zurich, Switzerland, September 1957. It will be annotated in both English and French following the custom of previous international meetings. The exhibit is not definitive nor comprehensive but is designed to show the scope and quality of research since 1800."

IV. *The Committee on Medical Education*: Milton Rosenbaum, Chairman, "The committee sponsored and organized a Round Table meeting during the May 1957 meetings on 'Pros and Cons' for a Straight Psychiatric Internship, or a Mixed Internship with the Inclusion of Psychiatry." The subject of medical education during the internship is very much in the limelight these days and therefore the Round Table is quite timely.

Dr. Brian Bird of the committee, has been appointed to serve with the *ad hoc* committee of the A.P.A. on General Practice in liaison with the American Academy of General Practice.

Several meetings have been held between the *ad hoc* committee of the A.P.A., made

up of the members of the Committee on Medical Education, and the *ad hoc* committee of the American Psychoanalytic Association, to discuss problems of mutual interest regarding psychoanalytic training during the residency period. The two *ad hoc* committees met again during the May meetings."

V. *The Committee on Public Health:* Roger W. Howell, Chairman, "1. Members of the Committee reviewed summary reports of different community surveys prepared by Dr. Blain and his staff, in preparation for discussing their future as a regular activity of the Central Office staff. A member of this committee participated in the survey conducted in the city and county of Saint Louis, Mo.

2. The Committee prepared a summary of its opus on the relationship between infectious diseases and mental retardation, which summary is to be presented at the 1957 meeting of the American Association for Mental Deficiency. It is hoped that it will be published.

3. Sponsored jointly with the Mental Health Section of the American Public Health Association a panel presentation on the subject "Public Health Aspects of the Tranquilizing Drugs." A member of the committee presented a summary of the presentations. This panel presented their material at the annual meeting of the American Public Health Association at Atlantic City in November, 1956.

4. Committee members continued their reviewing of the material so far assembled for our booklet for public health administrators entitled "How To Do It," referring to community mental health. It is hoped that the committee following discussions in May will be ready to prepare the booklet in its final form."

VI. *The Committee on Rehabilitation:* formerly known as the Committee on Medical Rehabilitation, Benjamin Simon, Chairman. "In addition to considering, as it does regularly, the progress of the Pilot Study on Rehabilitation (which is now in the last part of the evaluation phase) and the Round Tables for the next and succeeding years, the Committee undertook to set forth (at the request of Lucy D. Ozarn, M. D., director

of the Architectural Study Project) the philosophy of treatment which might become the ultimate basis for architectural development. The Committee will continue in this activity for the next year, at least.

The Committee undertook to act as an advisory committee to the study on Adjunctive Therapies being set up at Washburn University, Topeka, Kansas, under the direction of Dr. William H. Key, supported by a grant from the office of Vocational Rehabilitation. At its next meeting, the Committee will have as its guest Dr. Key, who will discuss the broad outline of the study.

The Chairman of the Committee represented THE AMERICAN PSYCHIATRIC ASSOCIATION on the advisory committee on Physical Therapy Education of the Council on Medical Education and Hospitals of the American Medical Association which met in Chicago on February 12, 1957. Dr. Simon was made a member of the four-man executive committee of the advisory committee, which is now fully organized and will function continuously.

A similar advisory committee on Occupational Therapy Education is being formed by the American Medical Association and the appointment of Dr. Simon to this committee has been recommended by the Council."

VII. *The Committee on Research:* Nathan S. Kline, Chairman; "1. A survey is being made of the positions available in state hospitals for research in psychiatry, in respect to both number, salaries and availability.

2. Ciba Pharmaceutical did not renew its support for the Psychiatric Research Reports and negotiations (subject to approval of Council) are being completed with another pharmaceutical house.

3. Five years of support were obtained for a research lectureship, to be known as the Adolf Meyer Research Lecture to be given at the annual meeting.

4. Preliminary meetings have been held and plans are being formulated for a National Conference on the subject of Psychiatric Research, its direction, financing, and training of personnel.

5. Regional Research Conferences were held in Philadelphia, Syracuse, and one is

planned for later this month at the University of Oklahoma.

6. The Committee on Research co-sponsored a meeting with the American Public Health Association on problems involving epidemiology of mental disorders at the annual meeting of the AAAS."

VIII. *The Committee on Therapy*: Paul H. Hoch, chairman, has continued to discuss "quite a number of issues which were referred to the Committee either by other committees of the Association or by outsiders.

The Committee was also engaged in revising the standards of electroshock therapy which had to be brought up to date.

The Committee began to organize a guide for physicians to psychiatric services which will be country-wide. Material has been collected about some of the states and this work is continuing. We hope that when it is completed a directory can be organized giving

the main psychiatric resources of the United States insofar as they relate to the general practice of medicine.

The Committee also engaged in discussions on the possibility of organizing a short manual on psychiatric therapies indicating their proper places in present psychiatric practice. No final decision was reached whether or not the Committee would undertake this project.

In summary, I wish to point out that these various committees have not only been working closely with other committees of our Association, but also with other state and national organizations. I wish to take this opportunity to publicly thank the chairmen and the members of these committees who have worked so faithfully and arduously during the past year. I am sure our entire organization will benefit for many years as a result of their splendid contributions.

FRANK J. CURRAN, M. D.,
Chairman.

AEROPHOBIA

Some are as much afraid of fresh air as persons in the hydrophobia are of fresh water. I myself had formerly this prejudice, this aerophobia, as I now account it. And dreading the supposed dangerous effects of cool air, I considered it as an enemy and closed with extreme care every crevice in the rooms I inhabited. Experience has convinced me of my error. I now look upon fresh air as a friend; I even sleep with an open window. I am persuaded that no common air from without is so unwholesome as the air within a close room that has been often breathed and not changed. . . . And I find it of importance to the happiness of life, the being freed from vain terrors, especially of objects that we are every day exposed inevitably to meet with. . . . It is to be hoped that in another century or two we may all find out, that it [fresh air] is not bad even for people in health.

—BENJAMIN FRANKLIN

FORGETTING

To know how to forget is more a matter of luck than of skill. The things which are better forgotten are those we remember best; memory is not merely a rogue in failing us when it is most needed, but a tool in turning up at inconvenient times; in matters which will prove troublesome, it is long, and in those which ought to be a source of pleasure it is headless. Sometimes the cure for misfortune consists in forgetting it, and the remedy is forgotten; it is advisable, therefore, to train the memory to good habits, for it can turn life into a heaven or a hell.

—BALTASAR GRACIAN
(The Oracle, 1647)

BOOK REVIEWS

SLEEP. By *Marie Stopes*. (New York: Philosophical Library, Inc., 1956. \$3.00.)

Dr. Stopes prefaces her book with: "No expert in the world really understands sleep or knows what it is. Nor do I: but in spite of that I feel that in this book, small though it is, I do contribute some facts and fancies many people may like to know."

After this the author then fails to distinguish that which she considers fact from that which was intended to be more fanciful. In this reviewer's opinion the latter predominates throughout. Since it is the curse of error that at least two statements are required to refute every one presented originally, and since there are so many ideas that are not validated, this book can best be reviewed by quoting a few of these passages for the scrutiny of the reader:

"Personally, I think it is a crime of the first magnitude to wake anyone, save in an emergency. I should lay down as an absolute rule that *no* child should be waked, not even a child of school age. Sleep is of *far* more value to a child than lessons. Anyone who continuously finds it necessary to use an alarm-clock, or be waked, should realize it is a sign that more sleep is needed, and should go to bed earlier." (pp. 5)

The book abounds in personal opinions such as this:

"One may have to sleep on the bare ground, or on a board, and millions of people do. We are, however, civilised communities and should make use, every time we can, of the best that our civilisation provides for us. A soft mattress is one of the good things we can now readily obtain.

"But do *not* go too far with the idea that modern things are necessarily really good and civilised. Often they lean backwards. The soft foam rubber mattress is an example of a modern 'advance' to be avoided by all who value their health. It is pernicious. Do *not* use any rubber mattress, and do *not* have rubber-tyred wheels on your bedstead. Why? Because rubber is an insulator, and cuts you off from electric currents of the earth with which you should be in contact. Many, sadly many, people are insulating themselves incessantly. Rubber-soled shoes all day, and then rubber covering to their floors, small wheels with rubber tyres on their beds—alas, poor things, they are being devitalised. No wonder millions at the end of the day feel limp and exhausted yet neither ready for, nor able to, sleep." (pp. 31)

Is this fact or fancy? The author sounds serious! This question might be passed over if the book then presented a few validating facts, but two pages later one reads:

"Beds are generally placed to suit the build of the room but this is often wrong. The place of the bed should be determined by something more fundamentally important, that is the direction of the

North. The head of the bed should be north or south, and the bed should extend between these two poles. It is comparatively unimportant whether the head or the feet are at the north end of the bed, but it is very important indeed that the extension of the body should lie along a line either south-north or north-south. Few people are now aware that we do not have only five senses, as children are senselessly taught in school, but we used to have, and some few people still have, other senses, and one of these is a sense of the north. It is just as clear and definite a sense as any other. One *sees* the wall in front of one, one *hears* the bird calling, and one *magnetates* the north. Magnetates? A new word, you say. Yes. A new word, and I am coining it here and now for a very real sense. I know about it, for I possess it. It is in my spine that I magnetate the north, between my shoulder-blades and hips. I used to have this sense so intensely that I could be blindfolded in a fog on a desolate moor and twisted round a great number of times, and could at once point to the exact north. This was tested by geologists with a compass and was often of great use to me. Since my back was broken and my abdominal walls cut, I am not so acutely sensitive to the north as I was, but still I generally feel it. If by chance I visit a house where my bed is set east-west, even though there may be nothing in the curtained room to indicate this, once I lie in the bed trying to sleep, I very soon suffer and so find out. I do not sleep till I have popped out of bed and shifted it to the north and south direction. If it is too heavy for me, I lie diametrically or slantwise across it till I am north and south, and even though this may make the bed-clothes rather uncomfortable, I am then able to sleep."

Anticipating the difficulties her colleagues might have swallowing the preceding statements, the author rebuts as follows:

"There are many, certainly the majority of ordinary people and also most medical doctors, who will scoff at the idea that the north and south placing of any bed is important. That does not show that they are wise, or right, or 'scientific'; it merely proves that they are ignorant of one of the existing human faculties. Many people who are quite unconscious of the faculty have a disturbed feeling which appears unaccountable when their beds are wrongly placed. I think this is because they feel subconsciously what some feel consciously.

"In all my life I have never found a living person who feels the north as acutely as I do . . ."

Concerning the fabric of bed clothes the author does not hesitate to decree:

"It is dangerous that cellulose fabrications should be allowed to call themselves 'pure silk' and so deceive women into thinking they are getting silk when they are not. The only pure silk in the world is made by silk worms and gives indescribable com-

fort undreamed of by the wearers of 'silk' and nylon. Real silk-worm silk is a delicate web for the capture of sleep."

About the effect of daylight saving time on sleep the author has more firm opinions. Another crime has been perpetrated against the sleep of civilized man by this practice.

Among causes for insomnia the author lists cold feet, noise, grief, worry, etc. Comparatively speaking, this is a refreshing factual interlude in the fancy replete in *Sleep*.

For those who intend to spare themselves the soporific chore of reading *Sleep* I quote a final gem:

"People who find difficulty in going to sleep, and have used all the usual dodges without success, might try the effect of having a large grandfather clock in the bedroom. A small, quick-ticking grandfather clock is no use. Before buying it, test it by having the ticks and your own heart-beats per minute each counted when you have been sitting quietly in a chair for five minutes. Unless the clock's ticks are materially slower than your own heart-beat, do not buy it. To act as a soporific your clock must be *markedly* slower than your own heart-beat when awake, or it will not be slower than your heart-beat when yours is slowed down in sleep. The effect of the slow grandfather clock is superlatively soothing and sleep-enticing."

JOSEPH J. PETERS, M. D.,
Philadelphia, Pa.

KLINISCHE ELEKTROPATHOLOGIE: I. Kritische Sammlung Elektropathologischer Gutachten Aus Interner Sicht. By Dr. S. Koepfen; II. Die Neurologie Des Elektrischen Unfalls Und Des Blitzschlags. By Dr. F. Panse. (Stuttgart: Georg Thieme Verlag, 1955. DM 33.-)

This work on Clinical Electropathology is part of a series on social and industrial medicine. The volume consists of 2 monographs by separate authors presenting essentially the same subject from different angles. The 2 independent monographs reached the publisher at about the same time and were united in a volume purposely without integrative editing by the authors. The texts complement rather than repeat each other. Slight differences in the approach would benefit rather than confuse the critical reader, in the opinion of the editors.

The first monograph, by Dr. Koepfen, bears the title, "A Critical Review of Electropathological Case Histories with Special Regard to Medico-legal Problems." It is a systematic presentation of the subject in a textbook-like manner, woven around case histories. The first chapter deals with physical and technical data. The clinical sections discuss cardiac, vascular, endocrine, respiratory, autonomous and central nervous disturbances in their relationship to electrical accidents. The clinical entities are presented not only as sequelae of electrical traumata, but also the outcome of electrical accidents are discussed in patients with pre-existing conditions in most of the above-mentioned categories.

The second monograph, by Dr. Panse, bears the title, "The Neurology of Accidents Caused by In-

dustrial Electricity and by Lightning, Including a Chapter on Electromagnetic Waves and Atomic Energy." This monograph like the first one starts with an electrophysical and technological introduction. In the clinical portion separate sections deal with the initial and the late results of electrical accidents. Of some interest to psychiatrists is the well documented discussion of the psychological impact of being struck by lightning or hit by industrial electricity (e.g. a very short episode of mild to severe impairment of awareness was frequent, retrograde amnesia however was unusual; occasional sensory experiences occurred similar to the epileptic aura; psychological reactions varied according to the personality and the circumstances; a temporary stupor state with inability to move was common when hit by a bolt of lightning, even if injury was light). The neurological and pathological sequelae discussed include cerebral oedema, cerebral degenerations (mostly basal ganglia), brain injuries due to burning, progressive atrophies of the spinal cord, also thermoelectric damages of the spinal cord and peripheral nerves. Therapeutic electric-shock receives but a few passing remarks in this book on clinical electropathology. The reason for this apparent neglect is a gratifying one: i.e. electroshock therapy is hardly an electrical hazard. The only neurological sequelae mentioned by Panse were the rare occurrences of an activation of latent epilepsy following a series of electroshock treatment (about 60 cases in the literature), and occasional cerebrovascular accidents during therapeutic convulsions.

Both monographs are well illustrated and documented by case histories, photographs, charts and diagrams. The presentation of the subject is thorough and authoritative, but peripheral to the interest of the psychiatrist. However, for those physicians who deal with the management, the forensic aspects or compensation of electrical casualties this volume is an excellent text and reference book.

A. BONKALO, M. D.,
Toronto Psychiatric Hospital.

A MANUAL OF PSYCHIATRY (3rd. Ed.). By K. R. Stallworthy. (New Zealand: N. M. Peryer, Ltd., pp. 324, 1955.)

This volume represents a brief textbook of psychiatry, obviously written for the beginner and apparently written for not only doctors but nurses and others working in a psychiatric institution. On the whole, the material is presented in accordance with the best thinking of American psychiatry and is well up to date.

The first chapter deals with "admissions" and "discharges" and is a discussion of the situation in New Zealand. You can be discharged as "recovered," "relieved," or "unrecovered." There are 2 brief chapters on "The Mind in Health" and the other on "Abnormal Psychology" which do not give the material in much detail. In the chapter on "Abnormal Psychology" less than 2 pages are given to psychoanalytic formulations. Likewise, in the chapter on "Psychotherapy" about 3 pages are

given to psychoanalysis, with about one of these pages devoted to the ideas of Jung and of Adler.

As a textbook for nurses and attendants and giving some of the material of a special textbook of psychiatry it is too condensed, oversimplified, and hardly to be compared with our best American textbooks on the subject.

K. M. B.

FRAGMENTS OF AN ANALYSIS WITH FREUD. By *Joseph Wortis*. (New York: Simon & Schuster, 1954. \$3.00.)

Twenty years after the event, Dr. Wortis has written one of the most fascinating and at the same time, important documents in modern psychiatric history. It is the almost verbatim account of approximately 4 months of didactic analytic sessions with Sigmund Freud. Because of the nature of the relationship, and the character of the analyst and analysand, there apparently resulted greater revelation of the former's thought and feeling than of the latter's. No matter what the ultimate judgment of history, Freud is one of the most important figures in psychiatric history and indeed in arts and letters, and a cultural figure of the first magnitude. A book, therefore, which gives intimate details not only of his very human characteristics, but at the same time reveals Freud's thoughts on his discipline and the world, as well as his colleagues, makes for reading which is almost breathless in pace.

The author, soon after becoming the recipient of a rather unique and important fellowship under the supervision of Havelock Ellis and Adolf Meyer decided that some psychoanalytic experience would be valuable to him. Arrangements were made with Freud and thus began what was probably one of the strangest analytic relationships extant. From the very beginning, the author kept a series of extensive notes on the interviews including verbatim quotations of the great teacher. The book is replete with little revealing remarks such as the importance of the classical chair-behind-the-couch arrangement to assure ease in the patient, "besides, I don't like to have people stare me in the face." It is greatly tempting to offer one quotation after another on psychiatry, art, finance, women, literature, America, christianity, physiology, jews, communism, colleagues, and above all, himself.

At the outset financial difficulties arose because fellowship funds were not immediately forthcoming and Freud's concern about his fees made matters somewhat touchy. This was not helped by the author's later request for a receipt, something one simply did not ask of a continental physician. The brash young American was apparently sufficiently irritating and at the same time intellectually stimulating that Freud, who was never known for his passivity during analysis, poured forth a wealth of comment on every topic under the sun. By actual count, almost a hundred different areas are enumerated in the index. Freud was an old man, ill, irritable, but still intellectually vigorous and interested in his environment. He was vain, dogmatic, and at times petty, but always interesting. His

biting and almost vicious comments on his colleagues, Stekel, Hirschfeld, Ellis and others are, if nothing else, refreshingly frank.

It is difficult not to agree with Havelock Ellis's remarks after reading the collected notes, "I consider the notes most valuable and that they ought someday to be published after Freud's death. . . . Their value is that they constitute an analysis of Freud and a precise revelation of his technique. I do not suppose that any similar record—even if it exists—will be published, as the ordinary patient would not of course care to give himself away." Adolf Meyer concurred with this statement and so must the reader.

BENJAMIN PASAMANICK, M.D.,
Columbus, Ohio.

MEDICAL ASPECTS OF TRAFFIC ACCIDENTS. Proceedings of the Montreal Conference. Edited by *Harold Elliott*. (Sun Life Assurance Company of Canada, 1955, pp. 511. \$7.00.)

This book of 511 pages consists of the proceedings of the conference held at McGill University, May 4 and 5, 1955. The subject matter is broad in scope and consists of the papers and discussions of the various participants in the conference.

This conference with Dr. Harold Elliott as the driving force represents a new and worthwhile approach in medicine marking a transition from the position of repairing the injured to an attempt at understanding the basic problem with prevention as the ultimate aim.

Although there have been previous approaches to this problem by various specialties within the profession attacking that section of the problem apparently related to their field of knowledge, this represents the first over-all gathering together of a large and relatively heterogeneous group within the profession to discuss all aspects of traffic accidents that have apparent medical significance.

Because of its very nature the subjects dealt with have little in common but the central theme of a contribution to our knowledge of understanding, preventing and alleviating the results of traffic accidents.

Of greatest interest to psychiatrists will be Chapter 8 dealing with the "Behaviour Aspects as a Cause of Traffic Accidents" with the subtitle of "The Role of the Psychiatrists." This consists of 2 papers, the subsequent discussion and the recommendation forwarded by the group. Dr. A. Canty presents the experience of the Psychopathic Clinic with the Recorders Court in Detroit, Mich., with an interesting breakdown of the psychiatric diagnoses encountered in a psychiatric clinic functioning on a referral basis. The report by Dr. I. Brody of personality studies carried out on a sample of cases referred because of traffic violations as compared with a group of "good" drivers. The preliminary findings reported support amply the concepts derived by more restricted approaches to the problem; namely, that "the basic problem is psychological, a matter principally of emotional and social adjustment."

While this book does not make easy reading be-

cause of the nature of its origin, it does represent an outstanding approach to a problem which previously received little attention and encouragement in medicine. It should serve as a most valuable reference source as well as a preliminary model for future studies.

G. E. HOBBS, M. D.,
University of Western Ontario.

LEWIS CARROLL. By Derek Hudson. (London: Constable; Toronto: Longmans, Green & Co., 1954. \$4.25.)

Lewis Carroll died in 1898. He was spared the ignominy of the twentieth century that Saint-Exupéry hated so fatally. There must have been affinity there—*Alice* and *Le Petit Prince*!

Hudson's book was needed. It is an excellent antidote to the pronouncements of Florence Becker Lennon in her book, *Victoria Through The Looking Glass* (scholarly as it is, with its 22 pages of bibliography). New York Times reviewer Orville Prescott says that despite her "prodigies of research" the Lennon book is "disappointing and tedious." He speaks of her "fruitless Freudian probings" and her "heavy-handed psychiatric jargon." These gratuitous interpolations by the author impair a book which otherwise contains useful information about Lewis Carroll.

The Hudson book does not undertake such interpretations. It is factual, objective, lets the story tell itself—altogether a wholesome and delightful book, undoubtedly the best study of that unique personality, Lewis Carroll, to date. The *Diaries of Lewis Carroll* published in 1954 and much unpublished material in possession of the family, as well as a great many letters from other sources and a mass of documents recently discovered at Christ Church, Oxford, were all made available to the author who feels that his work may be regarded as the definitive biography.

The word unique is not used idly in speaking of Lewis Carroll, not in the sense of uncommon or rare but rather in the sense of the only one of the kind. A full consideration of this various man can hardly fail to establish this estimate. He was a polymorph artist, an inimitable story teller for children up to age 99, a famous photographer, when photography was new (Helmut Gernsheim calls him "the most outstanding photographer of children in the 19th Century"), clever illustrator (he did the pictures for the original manuscript of *Alice*), poet, author, devotee of the theatre and opera; in addition, a scientist, authority in mathematics and logic (lecturer in mathematics at Christ Church, published *Symbolic Logic*), besides all this, a clergyman. In this profession he followed in his father's footsteps; also it was necessary to be in orders to become an Oxford don in the mid-nineteenth century.

Charles Lutwidge Dodgson, born 1832, was the third of 11 children and the eldest son. All his life he was a stammerer and this handicap propelled both his teaching and preaching. At 13 he was sent to Rugby where he spent almost 4 unhappy years.

His superior abilities won no respect from his fellow students. He was sensitive and shy and a teasing victim. At 18, just after being entered at Oxford, he suffered a sore loss in the death of his mother, many of whose quieter, feminine qualities were reflected in her son.

Fondness for children was a dominant characteristic of Lewis Carroll from his early years. He "carried his childhood with him." Children were naturally drawn to him and his extraordinary gift for entertaining them endeared him to them, and their attachment to his person amounted at times "almost to adoration." He once remarked, "children are three-fourths of my life." And on another occasion he spoke of "the hundred or so of child-friends who have brightened my life." The children were almost exclusively preadolescent little girls, and as maturity approached interest on both sides as a rule subsided. As he explains in one of his letters, "Usually the child becomes so entirely a different being as she grows into a woman, that our friendship has to change too: and that it usually does by gliding down, from a loving intimacy into an acquaintance that merely consists of a smile and a bow when we meet!" In a few cases child friendships continued mutually to the end of his life. In an appendix to the present book will be found letters from several of his child friends written after his death describing those delightful and idealized early experiences that lived on as cherished memories. With the rare exception he was not interested in little boys. "I am fond of children," he said, "except boys. . . . To me they are not an attractive race of beings."

It is questionable that Lewis Carroll felt for any woman the kind of love that commonly leads to marriage. From his twenties on he occasionally spoke—and that not casually—of the improbability that he would ever marry. He never did. Ellen Terry was one of his child friends and his devotion to her and her art continued through the years. In a letter in later life Ellen Terry wrote, "He was as fond of me as he could be of anyone over the age of ten."

Lewis Carroll was an aesthete and a perfectionist. He was a rigid self-disciplinarian. He examined his motives with utmost scruple and his integrity was unquestioned. He worshipped beauty. In Cologne Cathedral he was so overcome emotionally by the majesty of the soaring columns and noble arches that he "sobbed like a child." And it was children that he loved most, children in "that blissful innocent state" of their early years; with his dual nature he could associate with them as of their own age level and also as the protective grown-up to guide and amuse.

Of all his child friends it was Alice Liddell, daughter of the Dean of Christ Church that impressed him most profoundly. When he first saw this lovely child she was only 4. "I mark this day with a white stone," he said. This was his way of indicating memorable occasions. It was to her and for her that he told and wrote the marvellous stories in the *Alice* books. She was their inspiration, and but for that ideal relationship these stories would

never have been written and some of the finest things in the world's literature would not have come into being.

Professor York Powell, an Oxford contemporary, has drawn a fine pen picture of Lewis Carroll: "The quiet humour of his voice, a very pleasant voice, the occasional laugh—he was not a man that often laughed, though there was often a smile playing about his sensitive mouth—and the slight hesitation that whetted some of his wittiest sayings . . . his kindly sympathies, his rigid rule of his own life, his unselfish love of the little ones, whose liegeman he was, his dutiful discharge of every obligation that was in the slightest degree incumbent on him, his patience with his younger colleagues, . . . his rare modesty, and the natural kindness which preserved him from the faintest shadow of conceit, and made him singularly courteous to every one, high or low, he came across in his quiet academic life,—a good teller of anecdote, . . . a fantastic weaver of paradox and propounder of puzzle, a person who never let the talk flag, but never monopolized it, who had rather set others talking than talk himself, and was as pleased to hear a twice-told tale as to retell his own store of reminiscence. . . ."

And the late Viscount Simon in his recollections in an appendix: "The truth about Lewis Carroll is that he was always engaged in genially pulling somebody's leg and he did this very amusingly by propounding a comic mathematical problem to a non-mathematical mind. . . . I think he found the Canons of Christ Church easy meat!

"His parody of Euclid's third 'Postulate' is a good example of his wit. The Postulate runs: 'Let it be granted that a circle can be described about any centre at any distance from that centre.' He transformed this into: 'Let it be granted that a controversy can be raised about any subject at any distance from that subject.' How true that is!"

The author of this book covers, with full documentation, all phases of the life and work of this remarkable mathematician-logician-poet-photographer-storyteller-friend and entertainer of children, who at home was C. L. Dodgson, but to the ends of the world was Lewis Carroll.

It is pleasant to recall that in 1932 Mrs. Alice Liddell Hargreaves, at the age of 80, left her English home and came to the United States to attend a series of celebrations of the 100th anniversary of the birth of Lewis Carroll, and to receive from Dr. Nicholas Murray Butler, president of Columbia University, the degree of Doctor of Letters. She recalled the incomparable and unforgettable hours when she, a little girl of 10, listened to Lewis Carroll spinning his magic to the delight of her and her sisters. "He was the kindest of people to small children," she said.

Persons in the United States have more than one reason for celebrating the Fourth of July. July 4, 1862 was another birthday. It was on a river-party that day that the *Alice* stories began.

To the T.B.M. or other citizen troubled by the *Storm and Drang* of our unquiet times and who feels that possibly a little psychotherapy might do

him good, one might well, in agreement with the views of our late colleague, Paul Schilder, recommend as a tranquilizing potion a few pages from *Alice in Wonderland*.

This book about Lewis Carroll should have been reviewed earlier, but it came to hand only recently.

C. B. F.

THE CLINICAL INTERVIEW. VOL. II: THERAPY. By Felix Deutsch and William F. Murphy. (New York: International Universities Press, 1955. \$7.50.)

This second volume of Drs. Deutsch and Murphy's ambitious undertaking is devoted to therapy and is subtitled, "A Method of Teaching Sector Psychotherapy." Unfortunately the impression that the contents of the first volume did not justify the comprehensive title is not corrected by the second part, and there is no indication that further volumes are in preparation (Am. J. Psych., 113:95-96, 1956). The first chapter presents an erudite and concise outline of the method, but it seems to this reviewer that the distinction between sector psychotherapy and other psychotherapy is much more meaningful to the advanced and experienced therapist than to the trainee. The same must be said of the therapeutic sessions presented in subsequent chapters. They give evidence of the greatest skill in interviewing based on extraordinary familiarity with personality dynamics and analytic concepts, which cannot be copied or acquired quickly by relatively inexperienced trainees and young psychiatrists. There is no discussion of the teaching value of these interviews, let alone a critical evaluation of either the teaching method or of the therapy itself. The absence of such discussion is most striking at the end of Chapter 5 which presents an interview with a borderline psychotic patient, one that could hardly be considered therapeutic in retrospect. In the brief follow-up statement the reader learns that this patient later becomes psychotic, but the interview is entitled "Reticence in the Interview," as if only the technical aspects were to be considered. Neither volume dispels the general impression that abbreviated forms of therapy require deeper understanding, greater skill, and wider experience than prolonged and more detailed psychotherapeutic efforts. In the latter the definition of goals may be less precise and can evolve gradually while working with the patient. This is easier for the trainee whereas early and therapeutically realistic definition of goals and of therapy sectors requires the skill, experience, and wisdom of the authors.

The reader who expects more than a collection of expertly conducted interviews performed by exceptionally skilled therapists using their particular methods will be disappointed. While an attempt is made to define sector psychotherapy accurately and as distinct from other approaches, the contents of this volume are not convincing that such a separate designation is justified. Equivalent therapeutic work, possibly less well schematized and formulated and not as well documented, is being performed in many

institutions. (French & Alexander, *Analytic Therapy*; Lidz & Fleck, *Psychosomatic Medicine*, 3: 103, 1950). However, as a presentation of psychoanalytically oriented therapeutic interviews and selected psychosomatic case material this volume is highly recommended.

STEPHEN FLECK, M. D.,
Yale Psychiatric Institute.

A GUIDE TO PSYCHIATRIC BOOKS. (Second Revised Edition). By Karl A. Menninger, M. D. (New York: Grune & Stratton, 1956, 157 pp. \$4.75.)

In the 5 years since the publication of the first edition of *Guide To Psychiatric Books*, several related fields and subdisciplines in psychiatry have acquired substantial published material, which this second edition incorporates. Menninger has dropped his earlier method of starring preferred books, and re-arranged the table of contents to indicate the specialties that have risen in status during the past half decade.

The basic reading list for psychiatric residents is retained at the conclusion of the book, somewhat revised. A special reading list is offered for those interested in the interrelationships between religion and psychiatry.

Since this *Guide* is the only current comprehensive reading list in psychiatry published in book form, it will probably go into several editions. Only a person who has attempted to select the best that has been written in psychiatry would be in a position to quarrel with the selections here presented. Dropping the star-system in this edition further relieves the reviewer of the task of challenging marked preferences. All in all, the range of this guide is admirable, in view of its length (157 pp.). It is highly recommended.

A. C.

TRANVESTISM: MEN IN FEMALE DRESS. Edited by David O. Cauldwell, M. D. (New York: Sexology Corporation, 1956. \$3.00.)

This slim volume consists of 4 articles by medical sexologists, 4 by other writers and 11 autobiographic statements. Most of these have been reprinted from the journal, *Sexology*. It is pointed out that transvestism occurs more frequently in the male than in the female. The theories of causation which vary from physical to psychological, and mixtures in between are discussed. In classification the following types are mentioned: 1. heterosexual, 2. homosexual, 3. bisexual, 4. narcissistic and 5. asexual. The autobiographies illustrate clearly how often the patient's mother wanted a girl and literally raised her son to be one. Narcissistic, erotic, and compulsive features are also seen.

This book contributes little of value to the psychiatric profession as it is published for the general public. One feels that a well organized non-repetitious article in pamphlet form would have been more useful.

ERIC T. CARLSON, M. D.,
New York Hospital,
Cornell University
Medical College.

METHODISCHE PROBLEM DER KLINISCHEN PSYCHOTHERAPIE. By Dietrich Langen. (Stuttgart: Georg Thieme, Verlag, 1956.)

The term "clinical psychotherapy" as used by Langen in his book means psychotherapy in an inpatient setting as contrasted to the usual outpatient psychotherapy. The author, a disciple of E. Kretschmer in the department of psychiatry of Tübingen University, gives a comprehensive account of the methods used and the results achieved by him and his co-workers on a large number of neurotic and depressed patients. The sheltered climate of a hospital, the use of physical methods and group treatment in addition to individual psychotherapy make short-term treatment possible. Analysis of the actual conflict situation as well as of the personality structure marks the first step in the psychotherapeutic approach. On the basis of this analysis a formula is worked out which suggests the solution of the patient's actual problem. This formula is repeated to him in a hypnotic relaxation training program which follows largely the method described by I. H. Schultz. Group treatment is used for this relaxation training. Group discussions and psychodrama form other important parts of the group therapy. Subcoma insulin, fever and sleep treatment are used as adjuncts of the psychotherapeutic procedures. The technique of subcoma insulin therapy is described in detail. According to Langen, its value for a dynamically oriented psychotherapy is greater than that of the other physical methods because it facilitates drive processes and at the same time lowers the level of mental activity, thus leading to a dissociation most favorable for a dynamic understanding of the patient and his problems.

The book is written by a clinician experienced in clinical psychiatry as well as in psychotherapy. It should prove worthwhile reading for everybody interested in psychotherapeutic problems particularly in an inpatient setting.

V. A. KRAL, M.D.,
McGill University,
Montreal, Canada.

DAS AUTOGENE TRAINING (KONZENTRATIVE SELBSTENTSPANNUNG) Versuch Einer Klinisch-Praktischen Darstellung. By Prof. J. H. Schultz. (9th Ed.) (Stuttgart: Georg Thieme Verlag, 1956. Price DM 29.-)

The ninth edition of this book differs very little from the previous one, reviewed in this journal (see Vol. 111, pp. 634, Feb., 1955).

A few elaborations were added to the management of the "first manoeuvre" ("Erstübung") in the exercise of "concentrative self relaxation." Also a few new data were inserted in the clinical and theoretical sections of this work. The more important ones deal with the changes in heat regulation as well as with shifts in the blood count and blood sugar content brought about by the physiological actions of this therapeutic technique.

A. BONKALO, M. D.,
Toronto Psychiatric Hospital.

ELECTRODIAGNOSIS AND ELECTROMYOGRAPHY. Edited by Sidney Licht. (New Haven: Elizabeth Licht, pp. 272, 1956. \$10.00)

In the introductory chapter the editor outlines the history of electrophysiology and its application to modern medicine. He traces the development over the last 200 years, and it is evident that most advances have been made in physiology laboratories and not in clinics. The physiology of muscle and nerve presents so many various aspects, involving so many different disciplines, that the wisdom of having different authors for every chapter is fully justified. Although each chapter deals with different aspects, there is some overlap, but this is an advantage since several points of view are expressed.

The electrophysiology of muscle has developed sporadically, usually with little or no contact with clinical medicine. Ever since the argument of Galvani and Volta as to the nature of "animal electricity" the theoretical aspect has been in advance of the clinical. This is well demonstrated in the present volume. The chapter on "The Basic Physiology of Nerve and Muscle" gives clear, straightforward descriptions and explanations. There is no question in the authors' minds of the value and accuracy of the information they are expounding. The sections dealing with the clinical aspects give the impression that they are striving hard to convince the reader of the value of the method. On the whole, the clinical chapters are rather disappointing, not because of the organization or presentation of the material, but because electromyography has relatively little to offer as a diagnostic or prognostic tool. The electromyography can demonstrate muscular spasm, denervation, reinnervation, and possibly gives some information about myopathies. But with the present state of knowledge it has not the clinical importance of the electrocardiogram or the electroencephalogram.

For any person having an interest in diseases of muscle, however, this is an excellent reference book. It contains in one volume papers on the major aspects of the physiology of nerve and muscle. These are well and clearly written. The clinical chapters define the method and with this guide even the beginner would have no difficulty in observing and obtaining suitable records.

This volume is the first of the projected series on physical medicine. If the editor can maintain the standard of the present volume, the series will become a standard reference.

JOHN W. SCOTT, M.D.,
Toronto General Hospital

RORSCHACH LOCATION AND SCORING MANUAL. By Leonard Small. (New York: Grune & Stratton, 1956. \$6.50.)

This manual fills the need of an ancillary text for the student of the Rorschach Test. In it the author has succeeded in presenting a graphic and systematic collection of data which will be of great value to both beginning students, as well as teachers of the fundamentals of the Rorschach Test.

One of the most important contributions of this manual is the systematic listing of the combined scoring experience of 18 eminent Rorschach experts including Rorschach, Oberholzer, Beck, Klopfer, Hertz, Loosli-Usteri, Rickers-Ovsiakina, and others. More than 6,000 responses are listed and scored as F+ or F— in addition to the scoring for area, determinant, and content. Thus, in addition to Beck's already published norms for F+, this manual now makes available an ancillary collection of F+ and F— responses gleaned from many experts of the Rorschach Test. Some criteria are now available for those responses not found in Beck's norms. A note of caution is needed in this respect to avoid confabulating F+ norms of the various Rorschach workers. For those who utilize the various levels of F+ percent according to Beck's norms, his list of F+ and F— responses can only be used in considering the level of form accuracy.

For the beginning student who is using Beck's introductory text (*Rorschach's Test, I: Basic Processes*, Grune & Stratton, New York, 1949.), this manual may be regarded as a companion handbook. It presents graphically each of Beck's location areas for each of the 10 test figures. These location charts permit quick location of the scoring areas and this is further expedited by a convenient thumb-index system included in the pagination of the text. Each response listed is scored for area, determinant, and content. Beck's Z scores are also conveniently listed for each of the 10 test figures. Popular responses are also listed, but include only those of Beck and other workers, which coincide with his list of P responses. Content categories and abbreviations are also those used by Beck.

In general, this manual enhances the didactic value of Beck's introductory text by presenting the mechanics of his system in an ingenious, graphic and convenient fashion. The listing of the scoring of each of the 6,000 or more responses does have some limited value. However, the author himself cautions the beginner "against using the manual to score responses in a mechanical and rigid manner. The material offered here is guide to the scoring experience of leading workers, but can not be a substitute for the careful inquiry which is the mainstay of Rorschach procedure." The scoring of other Rorschach workers was converted by the author to Beck's symbols for consistency. However, it would be best to regard such conversions as extending beyond the mere exchange of one symbol for an equivalent Beck symbol. For example, this is especially true if one attempts to equate the numerous combinations of symbols for shading responses as scored by others, to the 3 more succinct shading symbols of Beck (V, Y, T). In spite of this, the numerous examples may be regarded as guideposts for the beginning student's problems in scoring. At least, the scoring examples create an awareness of all the determinants possible in any responses which have to be decided upon by an adequate inquiry.

HERMAN B. MOLISH, M.D.,
U.S. Naval Hospital,
Bethesda, Md.

EUROPEAN AND BRITISH PSYCHIATRY¹T. FERGUSON RODGER²

The first point I wish to make to excuse my relative ignorance of developments on the continent of Europe and to emphasize my lack of qualifications to speak for my European colleagues is to point out that while you think of Europe and Britain as one, which is geographically correct, in psychiatry, as in other fields, both culturally and politically, the English Channel is a greater barrier than the Atlantic. Our isolation from the Continent and our closeness to you in America is not entirely explained by the absence of a language barrier between us; developments in American psychiatry always seem congenial to us because, I think, your problems, as well as your solutions, are very much the same as ours.

When we review the contribution of European psychiatry over the past 50 years, we do realise, however, that we, and I speak for both Britain and America, owe everything to Europe: our clinical classification, the psychobiological approach, psychoanalysis, all the physical treatments and electroencephalography. We are now being offered existentialism, applied to psychotherapy, and we are both showing the same resistance to accepting it.

I believe, although it is perhaps only an impression which would have to be justified by a study of the literature, that we tend to accept developments from America rather than direct from Europe. My knowledge of European psychiatry is, I confess, very imperfect and I am aware only of those features which have recently made some kind of impression on British psychiatry. In the case of German psychiatry we are still a little estranged because of the war: we cannot altogether forget that German psychiatry, having shed psychoanalysis, was able, with seeming ease, to adjust its beliefs so that they became compatible with Nazi myths and

theories. Typologies lent support to racial prejudice and phenomenology was less critical of unreason than a dynamically oriented psychiatry might have been.

Perhaps the unity of British and American psychiatry is best explained by the fact that in our two countries, but not on the Continent, the psychobiological doctrine of Adolf Meyer came to be widely accepted. Macfie Campbell and David Henderson left Edinburgh to sit at his feet at Ward's Island. Henderson returned to become the leading figure in British psychiatry and wrote a textbook with Gillespie which became our standard work, effectively superseding all others within a few years of its publication in 1927. As a result my own generation tended to make the pilgrimage to Baltimore for our postgraduate training.

Although Henderson and Gillespie's text was hardly a full statement of psychobiological doctrine, it conveyed its essence and gave an admirable grounding in a dynamic approach to case-history taking and therapy. It was in this way that the psychobiological point of view sank in and became implicit in British psychiatry although the debt we owe to Adolf Meyer is seldom realised and even less frequently acknowledged.

This acceptance of an essentially dynamic viewpoint has created a soil on the whole more favourable to psychoanalysis than to phenomenology. It is on this background that the significance of the publication of a textbook of Clinical Psychiatry by Mayer-Gross and others, which is phenomenological in its outlook, has to be judged. Although the book has puzzled American reviewers who see it as some kind of throwback to a primitive phase of psychiatry, there are many psychiatrists in Britain who would regard it as a salutary return to careful clinical appraisal on a symptomatological level. This kind of approach is fostered by an interest in physical treatments. The mental hospital psychiatrist whose main problem is to decide which physical treatment he will use finds help and guidance in phenomenology although the same psychiatrist is likely also to be inter-

¹ Read at the Symposium, "Perspectives on International Psychiatry," at the 114th annual meeting of The American Psychiatric Association, Chicago, Ill., April 30-May 4, 1956.

² Address: 25 Campbell Drive, Bearsden, Glasgow, Scotland.

ested in psychoanalysis and the help it can give him in dealing with his psychoneurotic patients in the outpatient department.

Before I discuss British psychiatry further, I should turn to some consideration of the various points of view of which we have become aware in Europe during the past 10 years. It seems to us that in most of the European countries, the main emphasis is on physical treatment and in research based on biochemical or neurophysiological considerations. France has given us chlorpromazine; in recent years Switzerland has given us L.S.D. and the model psychosis as a field for research. In France the clinical approach emphasises careful case studies at the phenomenological level and, as I have said, many British psychiatrists would regard this emphasis as being salutary because careful case studies have been neglected in many other countries. Henry Ey has developed an organic-dynamic approach which has been called neo-Jacksonianism. Based on Hughlings Jackson's principles of evolution and dissolution of levels, his contribution is considered very significant by some British psychiatrists.

In Germany the impression one gets is that psychotherapy is practised on a rather superficial level and even on authoritarian lines but we are prepared to believe that it may be effective for all that. Our cultural differences explain our lack of interest.

But many German and Swiss psychiatrists have been influenced by the existentialist philosophy of Jaspers, which is based on Kierkegaard and Heidegger, and the revival of interest which is taking place in Germany in psychoanalysis tends to be combined with the existential analytic approach propounded by Binswanger. In Austria, Frankl of Vienna has promulgated his extended psychotherapeutic approach combining ordinary psychotherapy with logotherapy, which emphasises the importance of human responsibility. Frankl's views have attracted attention in Britain. He recognises three principles of importance to psychotherapy, the will-to-pleasure characteristic of psychoanalysis, the will-to-power of individual psychology, and what he would call the will-to-meaning. He regards the will-to-meaning as "that which most deeply inspires and pervades man"; "the innate, albeit often unconscious and

sometimes even repressed, desire to give as much meaning as possible to one's life, to realise as many values as possible." "Psychotherapy," he says, "would turn this will-to-meaning . . . into a human frailty, a complex, or something of the kind."

This aspect of existence, the will-to-meaning, according to Frankl's view, lies outside psychotherapy, as ordinarily understood, in the spiritual domain. He defines logotherapy as a psychotherapy which not only recognises the spiritual, but starts from the spiritual. He believes that just as sexual frustration can lead to neurosis, so also can frustration of the will-to-meaning lead to an existential neurosis. He traces the modern epidemic of neurosis to man's fear of responsibility and his weariness with the spiritual. He therefore recognises existential neurosis as a clinical entity which arises out of philosophical perplexity and the failure to find an adequate meaning for life. He and workers in Kretschmer's clinic categorise 12% of their neuroses as being of this kind.

In very recent times there has been more interest in existentialism in Britain, for example one of my own staff who is psychoanalytically orientated takes part in an informal discussion group formed by members of the Faculty of Divinity and some psychiatrists, which meets regularly to discuss these new ideas. It is possible that similar groups, not, as yet, expressing themselves in print, are being set up in other parts of the country. It is, perhaps, not without significance that the annual conference of the National Association for Mental Health, held in Britain in the spring of 1956, had as its theme Personal Responsibility in Mental Health, and the views expressed by the various speakers showed the same kind of preoccupation with the significance of responsibility in relation to mental health as their European counterparts, although I doubt if there is any direct link between them, merely a growing consciousness of the effects of a dissolution of value systems as a result of war and the upheaval in European societies. In part these trends emerge out of the feeling that with neurosis increasing rapidly in Western countries it is too much to expect psychotherapy to cure all our psychic troubles and restore human dignity. After years of propaganda

in which we advocated the importance of psychotherapy we have come to consider that perhaps psychiatry and psychotherapy have been oversold and that, in the long run, we shall never be able to overtake, unaided, the enormous task which confronts us. This point of view has even been expressed in the correspondence columns of the *Manchester Guardian* (April, 1956) where doctors have expressed the dilemma in which they find themselves; they are seeing more and more patients suffering from neurosis and they can choose two ways in which to treat them. They can either use the various chemical compounds urged on them by the manufacturers which depress or excite the C.N.S., or, as most of them believe is the right course, they can attempt to treat their patients as human beings and try to help them by sympathetic understanding. Those who endeavour to help their patients by the second method find themselves too much involved. There is plenty of willingness to help and no great reluctance to recognise neurosis and to treat it as such but once the doctor begins to adopt this attitude to his patients, his responsibilities enlarge and can never be defined in terms of his medical duties. Doctors, in other words, are beginning to wonder whether, when a patient comes with a problem about his marriage or his career, he is not going beyond what can reasonably be demanded from his doctor. One effect of the National Health Service has been to extend the patient's concept of the doctor's responsibility. On the whole doctors welcome this manifestation of a closer emotional relationship between doctor and patient, so different from what had been expected, in some quarters, from the National Health Service. But now, faced with apparently unlimited medical responsibility, they are asking what the community can do to share the burden which the doctor at present carries on his own.

For example, The College of General Practitioners in Scotland has expressed its interest in investigating this problem in the form of an enquiry into the prevalence of neurosis in practice to take into account such personal factors as personality, training and experience as determinants of the medical relationship which allows the patient to express his problems to his practitioner.

From the side of the church, in Scotland at least, there is a definite desire to be helpful through industrial and hospital chaplaincies and expanding objectives in pastoral care. They are asking for cooperation on the part of teaching psychiatric units to give courses for clergymen, not to help them to become psychotherapists but to give them an increased insight into how to handle human problems falling within their own sphere. It is unlikely that, in Britain, psychiatrists will extend their psychotherapy to include the spiritual side of their patients' problems as Frankl's approach would suggest, but they will expect clergymen to play an increasing part in the mental health field.

Those with a key position in the community are becoming increasingly aware of their responsibilities in regard to mental health. An extramural course on mental health at the University of Glasgow, each year attracted more nurses, teachers, local government officials and the like until the success of the course proved an embarrassment to us because of the numbers. Mental hospitals have numerous offers by laymen who wish to do something on a voluntary basis for mental patients and very successful committees have been created in the mental hospitals who visit and take responsibility for some aspect of the patient's welfare. Numerous other organisations have sprung up spontaneously throughout the country to care for sick and disabled persons and their influence has been wholly good. They are not pressure groups but provide such auxiliary services for patients and their relatives as they find within their competence.

It is recognised that statutory services for the care and aftercare of the mentally disabled are required and provision is made for them. I, personally, am not satisfied that we have found the correct pattern for these services and, at least in Scotland, there is an unexpressed mood to await developments before formulating the kind of service which will be most effective. Local government in Glasgow has expressed its need to learn by establishing an informal link with the University for mutual study of social factors in mental health. A link of this kind is neither traditional nor envisaged in any statutory enactment. It arises out of the recognition that public welfare devoted to the satisfac-

tion of material needs and to ensuring that no sick person goes untreated only goes so far and there is a need to tackle problems in the community of a new kind. The new housing estates provide satisfactory living conditions in terms of accommodation and hygiene but produce isolation and dissolution of previously healthy social groupings.

In these ways psychiatrists are being brought to face the social problems which lie behind their practice. Mental hygiene for the psychiatrist becomes a matter of aiding and advising on developments which arise spontaneously elsewhere.

Psychiatrists in Britain nowadays almost always have a part to play in a general hospital through the setting up of outpatient clinics in general hospitals staffed by mental hospital psychiatrists. A process of mutual learning and understanding is taking place whereby the general physician, the surgeon and the psychiatrist cooperate in the investigation of their cases. The fact that psychiatry has been invested, over a comparatively short space of time, with heavy responsibilities by an all-inclusive health service, renders psychiatrists less liable to involve themselves in responsibilities for treatment in cases where other specialities have as yet equal or superior claims. The position therefore is, that psychiatrists are co-operating with their colleagues in research in dermatology, general medicine and other fields, stressing etiology rather than therapy. The fact that we are thus absolved from the criticisms that might arise from premature claims in the field of psychotherapy has helped in creating a harmonious relationship with our colleagues. This kind of psychosomatic approach has the virtue of avoiding the one-sidedness of some formulations which proffer a ready-made holistic psychological conception which cannot always be readily accepted by physicians who are only too well aware of their own side of the story.

In our own hospital department mutual helpfulness has resulted in research projects into asthma, coronary thrombosis, ulcerative colitis and phthisis.

It is in this field of psychosomatic research that the liaison between continental and British psychiatrists is greatest. The work which is being done at Amsterdam and

Heidelberg has attracted a great deal of interest on the part of British workers. The editorial and advisory boards of the new *Journal of Psychosomatic Research* has members in Amsterdam, Rome, Stockholm, Madrid and Copenhagen, and British psychiatrists have been meeting their continental colleagues at an International Conference on Psychosomatic Research which was held in Amsterdam in April, 1956.

Sweden's main contribution, as it appears to us in Britain, is in the field of studies in heredity. It is perhaps significant that Germany, which led the way in this field before the war, seems to have given it up perhaps because it had become discredited through being used by the Nazis. The rightful heirs of that school of psychiatry are now Franz Kallman in New York and Eliot Slater in London.

The epidemiological surveys of the Scandinavian countries which are chiefly concerned with isolated rural populations are interesting methodologically and therefore have a basic scientific value but, since they are not dealing with the pressing problems of industrialised and urbanised communities, they seem rather remote from our concerns.

Here our interests are very much the same as yours because in common with you we are dealing with a highly industrialised society. Like you we are trying to develop a social psychiatry and in this there are determinants peculiar to our own development.

Since 1948 when the National Health Service came into existence, the development of psychiatry and the Mental Health Services can only be understood in relation to the new organisation of the Social Services. The idea of a welfare state, while it may not be politically acceptable to our critics, is now an important part of the British way of life. It would, of course, be untrue to say that doctors are wholly satisfied with the new regime but it is true that the majority accept it wholeheartedly and their frustration chiefly derives from the fact that the economic position of the country does not allow the further developments which everyone realises are desirable.

Psychiatry has gained by the National Health Service because mental health has now been given equal status to physical

health. The realisation by hospital authorities and the public that mental hospitals and psychiatric units had been given an inferior status in the past has created a loudly expressed demand in parliament and the press for improvements in hospital buildings, furnishings and diet as well as greater attention to research in mental health. This has happened elsewhere too, here in America, for example, through the care you have given to your veterans, but in Britain it is through the National Health Service that such changes are taking place.

The patient, and that is everyone in the community, has now the right to every kind of treatment and this has meant an enormously increased demand for psychiatric treatment. Ninety-eight percent of psychiatric patients under statutory care are in hospitals financed by the state.

The very great increase in admissions to mental hospitals, which began at the outbreak of the war when electroplexy was introduced, was accelerated after the war with the inception of the Health Service. In Scotland, for example, with a population of 5 million, the rate of all admissions to mental hospitals in the 5 years up to 1942 was steady at about .73 per thousand of the population per annum; by 1947 this figure had increased to 1 per thousand and in 1955 it was 1.76 per thousand—an increase of nearly two-and-a-half times in 13 years. This very great increase was due entirely to the rise in voluntary admissions over this period from approximately a total of 1300 in 1942 to 6,600 in 1955. The number of certified admissions in fact declined.

Patients, on the average, now spend only 1.9 months in the mental hospital and nearly three-quarters of all new patients are discharged within a year. It is a remarkable fact that this phenomenal increase in admissions took place with no significant expansion in the number of beds and, at first, with no great increase in the number of medical staff. Since 1948, however, there has been a steady increase in the number of psychiatrists employed throughout the country. Until 1954 the increase was proportionate to that which was occurring in other specialties but, in that year, the number of psychiatrists in training at the senior level had outstripped those in training for other specialties.

The provision for outpatient clinics has been greatly extended. Before 1948 only a few mental hospitals had responsibilities for outpatient clinics in general hospitals. Now the average hospital in England and Wales is responsible for about three such outpatient clinics.

The extension of the mental hospital psychiatrist's responsibilities to the outpatient clinic has led to a reorientation of his view of the mental hospital. While he has been spending a great deal of time with outpatients and has been handling a vastly increased number of patients seeking early treatment, this has not been at the expense of the chronic patients. On the contrary, the more helpful attitude which he is able to take regarding his newly admitted patients has led him to ask what more he can do for his chronic patients. There has been much more attention given to recreational and occupational activities in the hospital. At Banstead Hospital a Medical Research Council team has been supervising an experiment to create a factory within the hospital providing paid employment for the patients with, according to the first reports, remarkably encouraging results. Others have been discovering the value to the chronic patient of increased interpersonal relationships. In Glasgow, an experiment in group therapy of chronic schizophrenia gave promising results and indicated ways in which the therapeutic potential of the nurse and the mental hospital as a community could be increased.

Some of the enthusiasts for this new approach to rehabilitation already envisage their hospitals being emptied of all but a small residue of their chronic patients. They want no more hospital accommodation to be built until the effect of these measures has been fully worked out. The whole system of institutionalisation and alienation is suspect. The view is taken that it may produce more problems than the disease itself. This is one reason why there has been a very great interest in Querido's experiments in domiciliary care of psychiatric patients in Amsterdam.

Under the Health Service domiciliary consultations have increased by almost 100% in the 4 years between 1950 and 1954 and most psychiatrists would like to see much more attention being given to this aspect of the

Service. The need is for auxiliary workers and there is a great deal of discussion about the potential role of the public health nurse in the field of mental health. Day hospitals are also popular as a means of avoiding hospitalisation—there are now 16 in England and Wales dealing with psychiatric patients.

As you can see, psychiatry in Britain is changing its shape rapidly; it is acquiring a wider social orientation. While the service is still centered on the mental hospital the activities of its staff extend far beyond its walls.

Mental hospital psychiatrists now care for thousands of outpatients suffering from psychoneurosis. This responsibility is somehow being discharged although only a very small minority of the psychiatrists who undertake it have had any formal training in psychotherapeutic techniques. Most psychoanalysts are still in full-time private practice and there are only two outside London with responsibilities for teaching undergraduates or graduates. British psychiatrists are, on the whole, sympathetic to analysis but the analysts have played, up to the present time, a very minor role in the significant developments which are taking place in British psychiatry.

Obviously more attention will have to be paid to training psychiatrists in psychotherapy. At present there is only one Institute of Psychoanalysis in Britain providing intensive training, including personal analysis, and this has so far turned out only a few psychoanalysts who are interested in the general field of psychiatry. All we can do meantime in Scotland and the provinces is to use the few analysts who are prepared to pull up their roots in London, and act as supervisors of psychiatrists in training. Dr. Freeman, who came to my department 4 years ago as lecturer in psychotherapy in the university has been very helpful but he is the only analyst so employed outside of London. Most

university professors, of whom there are now 9, with 2 more to be appointed this summer, are turning this problem over in their minds and trying to find some kind of solution but it is unfortunate that the situation in regard to the contribution which psychoanalysis could make should be so unpromising.

While most psychiatrists are doing psychotherapy because they are committed to satisfying a demand and are prepared to honour their commitments as best they can, the whole question of the value of psychotherapy is still unresolved. Eysenck has issued a challenge. He asks for a demonstration of the effectiveness of psychotherapy. This is the kind of challenge which cannot be ignored in Britain where national resources are involved. So far psychiatrists have been too busy doing psychotherapy to take time off to examine what they are doing and, moreover, few of them would be satisfied by a formal experiment purporting to test its value. The fact is that the demand is there and the service has to be given.

One last remark, as you can see there is some kind of determination to be open-minded about future developments. Psychoanalysis is tolerantly regarded but by no means supreme, in the field of psychiatric thought. As on the Continent, there is a desire to see psychoanalysis extend its concepts, to become more biological on the one hand and at the same time to comprehend more of man's nature on the other. On the biological side, Lorenz and Tinbergen have had a vital impact, although as Kortlandt has pointed out their views could be greatly widened if they could assimilate the contribution of psychoanalysis.

This relationship between ethology and psychoanalysis is the development which I personally would single out as being the most significant.

INTERNATIONAL PSYCHIATRY¹

IAGO GALDSTON, M.D.²

There is an embarrassing vastness to the name of international psychiatry. One could almost treat of anything and still be talking in the subject. Under the circumstances, it seems best to approach it at its simplest level. Thus, suppose we were to treat of surgery and not of psychiatry, then what would we say about international surgery? I suspect that all of us would agree that surgery is surgery the world over. Such differences as may exist between the surgery of one country and that of another would be reflective of advancement or retardation, that is, some countries would be technologically a bit ahead and others a bit behind, but they would all be traveling the same road. One could then affirm, without fear of contradiction, that surgery is one and the same the world over—that it is in other words truly international. But is this equally true in psychiatry? Let us take a look at a singular example. Let us look at, say, an American worker, and at his Russian counterpart. Let us assume that each has suffered, say, a compound fracture of the humerus. I am quite certain that in each instance the procedure followed in the treatment of the fracture would be, if not identical, certainly close enough to be equivalents. In other words, the American worker in America and the Russian worker in Russia could be interchanged in the locus of treatment, and yet come out having had pretty much the same experience. But now let us assume that instead of having suffered a fracture we are confronted with a Russian and an American, each of whom is suffering from some psychiatric illness—say a hand-washing compulsion. In such a case, one could be sure that the treatment of the Russian and that of his American counterpart would be quite different. The Russian therapist, treating the Russian, would be oriented in Pavlovian

psychiatry, and would be indifferent to and indeed even antagonistic to psychoanalysis and to all forms and schools of depth psychiatry. The American psychiatrist, on the other hand, while perhaps not too well informed on the subtleties of the conditioned reflex, would not be overtly antagonistic to them. His therapeutic accents and emphasis however would be radically different from those of his Russian counterpart. To summate this—the Russian surgeon would closely resemble the American surgeon. But such would not be the case with the Russian psychiatrist and his American counterpart. Let me paraphrase it still another way—there is an international surgery, but only a *national* psychiatry.

One might easily be tempted to believe that the instance cited is loaded, that the example is unique—with Russia at one pole and the United States at the other. Or one might even assume that the difference is not really Russian, but merely Communist in character.

This assumption however, would be not only erroneous but also beside the point. Pavlov was a Russian and really never a Communist and Russian psychiatry was always different from European psychiatry (Korsakov—Bechterov), just as Russian literature and Russian drama differed from that of Europe.

The fact is that psychiatry is *nationalist* in character not only for Russia but for most countries and for most nations. In that respect it is unique among the biological disciplines and specialties!

What evidence can we muster for this affirmation? I think the data of history will do very well. Thus I am sure it was no accident that both Mesmer and Freud were not only citizens of the same country, Austria, but also of the same city—Vienna. Nor is it a negligible fact that Romantic Medicine had its roots and its broadest field of exercise in the Germanic countries. Among the great authors of the Romantic Period are to be found the anticipators and the forerunners

¹ Presented at the 9th Annual Institute in Psychiatry and Neurology, VA Hospital, North Little Rock, Ark., February 28, 1957.

² Chairman, Committee on International Relations, The American Psychiatric Association. Address: 2 East 103rd St., New York 29, N. Y.

of modern depth psychology. These are to be found no less among the novelists and poets—Novalis, Tieck, Schlegel, Chamisso, and Uhland, than among its scientists—Carus, Schelling, Oken, Schubert. Carus had fathomed the role of the unconscious in the operations of the psyche some 60 years before Freud, and Schubert wrote a work on dreams which is in some respects superior to Freud's classic study. Austro-Germanic psychiatry stands in marked contrast to that of France, and of most of the Latin countries. In a measure it was cultivated in protest to the rationalist-materialist-mechanist viewpoint, developed by the outstanding French scientists during the Age of Enlightenment. French psychiatry took its line of departure from Descartes, and down to the time of Pierre Janet has been essentially, and almost exclusively Cartesian, that is *materialist* and *mechanist*.

The fame of French psychiatry derives from its liberal, humanitarian, custodial treatment of the insane. Its psychiatry, however, has practically always been mechanistic. Janet, who perhaps better than anyone else in modern times, has given us a definitive nosography of the neuroses, and who thereby came so very close to Freud's ideas that some have suspected Freud of plagiarism, was yet a mechanistic psychiatrist, quite in the Cartesian tradition. Neurasthenia, which to Janet was the critical etiological factor in mental disease, and particularly in the neuroses, is primarily an energy concept. The neurasthenic is one who is weak or weakened in the operations of his nervous system. Neurasthenia, incidentally, was a psychiatric concept also much favored by American psychiatrists in the early part of this century, notably by Boris Sidis.

French psychiatry and Austro-Germanic psychiatry are two outstanding examples of what can with warrant be termed—national psychiatries. But English, Italian, Swiss, and even American psychiatry have each their distinctive national accents. The English have given rise to no definitive "schools of psychiatry" but in psychiatric practice they have been and continue to be pioneers in the "custodial treatment" of the mentally sick. I call to your attention the noteworthy work of T. P. Rees.

The French, following on the revolutionary and dramatic achievements of Pinel, gained a reputation for the humane treatment of the insane, but it was, I am sure, the English who actually and consistently achieved the most in this sphere. This is quite understandable, for it is in consonance with the spirit and tradition of British social justice and British social reform. Swiss psychiatry has, it seems to me, always been rather heavily freighted with moral and religious considerations. Jung, of course, may be cited in witness, but the characteristic antedates Jung, and is reflected, for example, in Maeder's work, as well as in that of Forel.

Italian psychiatry is difficult to characterize, for it shares in a large measure the imprint of French psychiatry; it is in other words permeated with the philosophy of Cartesianism. One thing, however, is noteworthy. Italian psychiatry as Italian medicine in general is rich in *instrumentations* and in instrumental procedures. The Italians have been good technicians and medicine entire has profited by their skills. One can think at random of Galileo, Sanctorio, Borrelli, Volta, Forlanini, Cerletti—men who have enriched the practice and science of medicine with the products of their inventive genius. Electroshock therapy and electro-narcosis are Italian contributions to the physical modalities of psychotherapy (Cerletti and Bini, 1938).

American psychiatry, by which I intend psychiatry in the United States, is essentially eclectic, and if there is anything distinctively national about our psychiatry it is the facility with which we accept and make our own the scientific contributions of other peoples and of other nations.

In psychiatry we are not chauvinists. It is indeed noteworthy how very few of the psychiatric formulations, academic or otherwise, and how very few of the psychiatric diagnostic or therapeutic procedures we utilize are truly native in origin. Our contributions in psychiatry are less of an inventive nature and more of an elaborative character. We "take over and develop," sometimes, as in the case of behaviorism, with rather unhappy results. In all of this I am not unmindful of Adolf Meyer's contributions, those of Sul-

livan, and those of Trigant Burrow, three of America's most original psychiatric theoreticians. Trigant Burrow, incidentally, is all-too-little known and appreciated. However, despite this cluster of brilliant minds, and others besides whom I have not named, American psychiatry is much more eclectic and integrative than original.

This brings me to something which I must hasten to express. Generalizations concerning the psychiatry of a country are as subject to contradiction and exception as is any generalization about a *people*. We say Norwegians are tall, blond, and blue-eyed, while Italians are short, dark, and brown-eyed. But there are some short Norwegians, and in Northern Italy there are quite a number of tall, blond Italians. And yet despite these exceptions, the generalizations still *are valid as generalizations*.

Scanning the distinguishing characteristics of nationalist psychiatry, I could not but also recall that Mesmer had his greatest triumph not in Vienna, nor even in Austria, but in Paris, and yet it was the Commission of the French Academy whose membership included our own illustrious Benjamin Franklin, which, so to say, gave the "*coup de grace*" to Mesmerism in France, with what we now cannot but esteem as the fatuous judgment—"*l'imagination fait tout, le magnétisme nul*." England was in effect the land wherein Mesmerism found its most devoted and intransigent defenders and theoreticians, in Braid, and Ellistson.

Charcot, Bernheim, and Liébeault are the links whereby Mesmerism, transmuted into hypnotism and suggestion, reach to Freud, again on French soil. Nor can we overlook the fact that psychoanalysis found its first "academic" recognition not in Austria but in Switzerland, at the Berhölzli in Zurich, and that the United States more than any other country has proved hospitable to the "Viennese—Romantic." It was an event of heroic proportions when, in 1909, Stanley Hall invited Freud to come to America to expound his psychological theories, and James Jackson Putnam, then in his sixties, became a student and advocate of psychoanalysis.

I have set in opposition the Austro-Germanic and the French schools of psychiatry, yet one could question whether any French

admirer of Descartes could out-vigor in his Cartesianism, that is, in his determinist and mechanistic interpretations of the human brain and of its operations, Freud's own teacher, Theodor Meynert. Add to Meynert, DeBois Reymond and von Helmholtz, and you have a masterful contingent of Cartesians right in the very heart of the Germanic realm.

All this would then appear to invalidate any assumption of a nationalist psychiatry. But in effect it doesn't and cannot—just why, I'll demonstrate later.

The exceptions I have cited, and I could well have increased their number tenfold, only prove that every valid generalization has its exceptions which while true enough do not singly or collectively invalidate the generalization. Or to paraphrase it, homogeneity is a statistical preponderance, not the highest state of uniformity. The Norwegians really are tall, blond, and blue-eyed, even though some Norwegians are otherwise.

Now then, you might properly ask, suppose we grant you all this, suppose we grant you that regional psychiatry is nationalist in character, what of it?

The answer is that in this concurrence we have the validation of a most interesting and most provocative issue, namely, *Why of all the medicobiological disciplines is psychiatry the only one that is nationalist in character, while all others, say surgery or endocrinology, or immunology, are global, universalistic, or, as we have affirmed it, international in character.* The answer to this is as simple as it is direct, and, as it is exquisitely significant. It amounts to this: in all other departments of medicine the physician intercedes between man and nature, and, of course nature is the same the world over. In psychiatry however, the physician intercedes between, not only man and nature, but most often and mainly, between man and society, and society, that is the social organism, its structure, operations, exactions, etc., quite unlike nature's, is *not* the same the world over. Society frequently changes in the most astonishing ways "*at the national border.*"

Psychiatry, though essentially a biological science, must perforce take into account and be responsive to the societal and cultural field forces in which its subjects operate.

That is why psychiatry takes on a nationalist complexion. For psychiatry is in effect an anthropological science, superstructured on the elementary sciences of neuro-anatomy, neuro-physiology, and functional psychology. Mankind, hedged in by the universal and omnipresent demands of nature, has, during the 500,000 years of his being on earth experimented with, and has cultivated a variety of ways to meet them, and these he has formulated and sanctioned in a variety of ethical, cultural, economic, aesthetic, and moral patterns, all of which are reflected in his singular societal group pattern.

Hunger is hunger, the world over. But how man satisfies his hunger, be it for food, sex, property, or power, differs the world over. Psychiatry is involved not only in the anatomy and physiology of hunger, but even more, in the societal group patterns, the mores and taboos for satisfying hunger. That is why psychiatry is, initially nationalist in character. For nations do have a predominant and characteristic group pattern for ethical, cultural, economic, and moral operations.

Salvador de Madariaga, in his stimulating book *Englishmen, Frenchmen, Spaniards* (Oxford Press, 1920), makes these pertinent comments.

There is such a thing as national character. Opinions may differ as to the influences which create or alter it. Race, climate, economic conditions, may enter for a greater or lesser part in its inception and development. But the fact is there and stares us in the face. History, geography, religion, language, even the common will are not enough to define a nation. A nation is a fact of psychology. It is that which is *natural* or *native* in it which gives its force to the word *nation*. A nation is a character. (p. 41 *op cit.*)

To affirm, and to concur, as I believe we must, that "A nation is a fact of psychology," and that "A nation is a character," is to do more than to second and endorse the apt phrases of an ingenious social observer. It is, as a matter of fact, to take on the commitments of some very pertinent implications. It is indeed to acknowledge that psychiatry, though rooted in biology, transcends it, reaching into the outstretching terrains of social anthropology and ethnology. Thus we cannot and may not expect to find an answer in the data of neuro-anatomy and neuro-physiology, reined though they be to the ul-

mate, to the problems that derive from value judgments, life goals, ambitions, ideals, or from conscience and guilt. These, in the last analysis, are societal rather than simply biological quanta. Likewise, these in the last analysis give meaning to the affirmation that "A nation is a fact of psychology," "A nation is a character."

There is a converse implication: it may be that the problems themselves, those which psychiatry confronts, may not be biologically solvable, even with the aid of the most sovereign tranquilizers, but may be amenable to solution only as value judgments, life goals, ambitions, ideals, and guilt are modified and made more reconcilable with human capacities, and with the potentialities of reality.

Recently, I was privileged to take part in a conference of very learned professors (I was the mute and generously tolerated outsider), who ventured to question the assumed superiority of the Western world's concept and ideal of individualism, seeing that this ideal was shared neither by the Chinese, the Indians, nor the Russians. The crucial issue however, turned out to be not the superiority of the Western world's idea of individualism, but rather, whether in effect it was an existing reality, and not merely a figment of the imagination. All this, however, has taken me far afield, and you might properly ask—what has it to do with International Psychiatry. Indeed, you might go further and affirm something of this order: granted that psychiatry carries the complexion of its national locus, I, myself, as a psychiatrist, am after all national rather than international: is it not then quite sufficient for me to be acquainted with, and facile with, my own native psychiatry? Must I also be informed on, and at ease with, Russian Pavlovianism, Austrian Neotranscendentalism, French Existentialist psychiatry? Obviously, there is no *must* in the situation, nor in my argument. The compulsion or *must*, to *appreciate international psychiatry*, derives, if at all, from one's own professional body image, or if you wish, from one's ego ideal. Spoken plainly it means "it all depends on how sophisticated you aim to be in your professional orientation." But in truth there is more to it.

There is an ancient saying "I fear the man

of one book." I would paraphrase this to read "I fear the monolithic psychiatrist!" I fear the man of one book, the orthodox devotee of the one school, the so-called elect among the elect. Historically there was justification for partisanship. The pioneer must perforce be the passionate protagonist. But we are now far beyond the pioneering stage in psychiatry. The affiliation suffix *ian* must currently be deemed the symbol of an arrested fixation.

In psychiatry it is incumbent upon us to *recognize* national accents, but only within the purview of an international encompassment. I am sure this is none-too-clear, but then the issue itself is complicated and obscure. Let me try to make it a bit clearer. In the different nationalist cultures it was not different species of men that came under scrutiny, but rather the same men, under different scrutinies. The Russian isn't really different from the New Zealander or the American. It is the "emphasis," as the Frenchman said, that differs. There is no economic man, distinct, say, from the religious man, or from the biological man, or from the social man. There is but one man, to be studied from many angles.

Much of psychiatry, propounded on a nationalist level, and espoused by the so-called singular schools of psychiatry, is, however, single-faceted, not all-inclusive but rather parochial. Thus we encounter schools that accent "the instinctual man," or "the neurological man," or "the spiritual man," and so on. The overriding evidence, however, is that man is *none of these, singly, but all of them, collectively*. Man is "instinctual," "economic," "neurologic," "spiritual," and, much more besides.

I have drawn great encouragement of late from the criticisms leveled, chiefly by the younger men, against the orthodox positions of the older schools, which are seemingly indifferent to, or ignorant of, the economic, social, cultural, and religious factors that enter into and affect mental and emotional health and stability. They ask, for example, what of the minority group individual who finds himself in the midst of an inimical majority. What order of normalcy can you expect from him, and may not his "abnormal"

reaction be situationally quite normal? I have been much stimulated by the resurgent interest among psychiatrists in the role of religion in the emotional life of the individual. There is a most praiseworthy concern now emerging with the *family* as the matrix setting of the individual, and it is encouraging that even among the orthodox analysts some have come to recognize the difficulty, nay at times the impossibility, of dealing with one partner in a marriage to the exclusion of the other, or with one member of a family group to the exclusion of the other crucial members of the family group. What I am saying then is that an appreciation of the varied and different approaches to man reflected in the historical psychiatry of different nations, and integrated in a global survey of psychiatry, will afford us a better balanced and more comprehensive understanding of man psychological.

We need to cultivate such a balanced and comprehensive understanding of man psychological, in order that we might be better, *i.e.*, more effective psychotherapists, and also that as educated men in positions of power and prestige, we might help mankind to wrestle more effectively with the enormous problems confronting us. We in the United States are in particular need for a comprehensive understanding of man psychological, for we are, ourselves, an international nation—that is, a nation more *compounded* than *amalgamated*, out of many nationalities. I grant that even as psychiatrists we cannot be all things to all men, but we can and must seek to understand more things about more humans, for in essence this is requisite to our function.

We once entertained in this land of ours the fiction of a melting pot. The crude ores of all our immigrant peoples were to be smelted into the prototype of Homo Americanus. But it was never effected: and isn't ever likely to be, and thank the Lord for that. Nor, looking forward, does it seem likely that this world, becoming *one world*, will be rendered as of one world.

Before World War I, at the time when the melting pot idea was so common, we in America also believed that we were at the head of the procession marching on the long

road from barbarism to democracy. We looked upon the backward nations, *i.e.*, those ruled by kings and emperors, those without bath tubs, refrigerators, automobiles, votes for women, and other "civilized" appurtenances, as stragglers on the highway of civilization, late to get started and slow to move on, but likely, with our good example before them, to get going, and in time perhaps even to catch up. Without affirming it in so many words, we assumed that America forecast the pattern of things to come for all peoples and all nations. If you will trouble to study Woodrow Wilson's political philosophy and his 14 points, you will perceive how much

we considered ourselves the pattern for all men.

Two world wars and the challenge of two non-democratic philosophies of government—fascism and communism—(I cannot count Nazism as a philosophy but only as an epidemic madness)—have sobered us in our expectations, and have prompted us to question our assumptions.

We are beginning to suspect that there may be *not one*, but many ways to live life, that *I* for example might prefer individualism, but that collectivism is preferred by others and may even be more—in this complexity—suitable to their needs.

AMERICAN PSYCHIATRY¹

JOHN C. WHITEHORN, M.D.²

To give a brief yet meaningful view of American psychiatry—that is the task required of me at this moment. To make it brief means to omit much; to make it meaningful means to express (or to imply) some interpretations. Selection and interpretation inevitably produce some distortion. I hope that the distortions involved in my brief sketch will not produce an unjust caricature, or any unjustified eulogy, of the professional work and aims of American psychiatrists—a professional group approaching ten thousand in number, with widely diversified interests, working in a general population which regards their efforts with unprecedented interest and which grants them an unaccustomed measure of acceptance. This situation astonishes the rest of the world—and it is also somewhat confusing to us.

It is perhaps fortunate that I must present this view of American psychiatry in the presence of a considerable and important segment of the American psychiatric profession, competent to set me right in any serious misstatement, but, I hope, sufficiently kind to overlook minor lapses.

The historical background of American psychiatry has been the humanitarian but medically professionalized care and treatment of the insane; but a very significant recent development has been the increasing attention and effort devoted to the problems of life stress and to the treatment and prevention of neurotic discomforts and disabilities.

Quasi-technical psychiatric terms like "personality," "attitudes," "reactions," "complexes," "defense mechanisms," etc., have gained wide popular usage and the climate of opinion fostered thereby constitutes a part of the social milieu in which American psychiatrists choose their careers and do their work. There are occasions when one is inclined to deplore the exaggerated expecta-

tions sometimes generated by psychiatric "public education." For example, some American mothers have been thrown into great anxiety, which has driven them to seek frantically for fixed rules as to the right method for bringing up children.

Yet it seems probable, on the whole, that the American public is being led to develop more naturalistic ideas about mental illness in place of age-old attitudes of horror and superstitious aversion. The net result in the long run should therefore be constructive, although temporarily we may suffer from prematurely crystallized and prematurely popularized hypotheses.

At present, American psychiatrists appear to be in a mood of dedicated optimism and therapeutic fervor, contrasting markedly with the pessimism or therapeutic nihilism of the preceding generation. Even in the presentation of the statistical size of the psychiatric problems, Americans manifest currently, by implication if not outspokenly, an underlying optimistic obligation, as if to say, "See what a problem we have! Something must be done about it, and something will be done about it!"

In our therapeutic eagerness we may, in the eyes of our foreign friends, manifest a somewhat excessive enthusiasm regarding the measures we happen at the moment to be using. Our psychiatric journals reflect these waves of enthusiasm, and even more, the daily press, but these media do not in true measure reflect the more sober conservatism of the larger number of psychiatric practitioners; hence those who know us only through our journals or newspapers are likely to get a somewhat exaggerated idea of this over-enthusiasm.

The present rather characteristic American mood of therapeutic eagerness, although welcomed for its constructive force, has given concern to some of us in close touch with the young men and women entering upon careers in psychiatry. We had a strong surge of enthusiasm in the forties for psychodynamic formulations and psychoanalytic therapy;

¹ Read at the Symposium, "Perspectives on International Psychiatry," at the 112th annual meeting of The American Psychiatric Association, Chicago, Ill., April 30-May 4, 1956.

² Henry Phipps Psychiatric Clinic, Johns Hopkins Hospital, Baltimore, Md.

now we are in the midst—perhaps only at the beginning—of a wave of enthusiasm for a *pharmacodynamic* approach. The general atmosphere of obligation to cure seems at times to deaden a bit the eagerness and the industry available for the hard tasks of gaining more fundamental understanding. Pre-occupation with therapy seems at times to have somewhat the quality of an obsessional neurosis. The appeal of therapeutic practice—an appeal which is emotional as well as financial—appears to outshine, for some of our ablest young psychiatrists, the appeal of the investigative work. Fortunately, this tendency has not been altogether sweeping.

One manifestation of the increasing public interest and optimism regarding psychiatry in America has been the increase in funds made available for psychiatric research both by private philanthropy and from Governmental sources. A considerable proportion of these millions of dollars is being put into studies which we now like to call "behavior sciences." If the intensive cultivation of this field by the project method *can* be counted on to produce fruitful results, the next scientific generation should understand behavior better. It could be, however, that we will merely get newer and more elaborate versions of behaviorism. The problem of wisely expending such increasing funds has been a matter of much concern, with a tendency to rely heavily upon advisory committees and boards to select fruitful projects. There are grave dangers of waste and ineffectiveness in expending research support on committee-selected projects of relatively restricted operation and duration. In this way, support is more readily obtainable for the hypothesis-testing function of science than for creative work. Experimental design gets priority in committee deliberations over the capacity to generate ideas and to stimulate the investigative work of students. When I spoke before this Association 6 years ago, upon the role of the university in medical education and progress, I commented rather harshly upon the disadvantages of the project type of supporting research. It seemed that the American public was being led to expect that the fruits of science could be regularly obtainable without giving basic support to the educational and scholarly enterprises which nourish

the roots of the tree, through free inquiry and unrestricted curiosity. Others have also spoken, more effectively, to the same purpose; and there is coming about a slow and gradual, but perceptible, liberalization of the terms and conditions of research grants. The American people have always given generous support when their interest was aroused, but we as a people have been somewhat impatient about basic research, and are only now gaining an appreciation of the slow and undramatic processes involved in basic scientific progress. We have tended to think of research as a job to be done rather than as a thought to be pursued, wherever it might lead, and so we run, by habit, towards surveys or projects.

This Association is at present engaged, with other related professional groups, in a three-year survey by a selected task force, of the problems of mental health in America. One result of that survey will undoubtedly be a comprehensive report, depicting truly the present actual situation in American psychiatry in contrast to the impressionistic sketch I now present. This survey will assuredly provide a graphic picture of the psychiatric tasks, and a critical review of the institutionalized agencies currently employed to perform those tasks. I hope that it will also attempt to depict the germinal ideas, so far as they can be ascertained, which as yet may have no direct application in the mental health field, but which in fundamental ways may deepen our basic understanding of the psychiatric problems. The survey will not of course be altogether successful in pinpointing these basic concepts. Some of them have not yet been conceived, and some conceptions that will in time be fruitful may look at present pretty insignificant. But it is one of the great needs in America to devote a larger share of its available support to the unrestricted research which is potentially productive of basic ideas, in situations most favorable to creative thought and to the stimulation of oncoming students, *i.e.*, primarily in the universities. There is evidence, as I say, of a movement for greater support in this way to nourish the roots of creative investigation; and the survey by the Joint Commission will, I hope, emphasize the sound strategy of that mode of cultivating knowledge.

The social sciences are receiving currently considerable support in the name of psychiatric research, and this tendency is in accord with the prevalent emphasis in American psychiatry upon the social implications of mental and emotional illness—an emphasis upon social implications which has for half a century persistently characterized American psychiatric thinking, beginning early in this century in Dr. Adolf Meyer's interests, (1) in the development of social habits, (2) in the influence of school life on personality development and (3) in the individual person's use of the consensus for the maintenance of a healthy outlook on life.

Characteristic American interest in the basic social implications of psychiatric illness also found expression in Harry Stack Sullivan's interpersonal formulations, in more recent transactional formulations as exemplified by Grinker's group of investigators, and in the reformulations of psychiatric and psychodynamic problems in terms of social roles, as expounded by Norman Cameron, and more recently by John Spiegel. Erik Erickson's recent studies of the adolescent's struggles over ego-identity may be grouped also with these socially-oriented psychodynamic studies. The basic ideas of Sigmund Freud have strongly influenced these developments.

It may be that the preoccupation of American psychiatrists with the social environment is a reflection of our cultural history as a melting pot for people from widely differing cultural backgrounds, and the extensive cultural changes which have accompanied internal migration, incident to industrialization and urbanization.

Moreno's sociometric methods of study and his psychodramatic methods of therapy have exerted a stimulating influence on the study and utilization of social forces in psychiatric work.

A growing tendency toward collaboration between psychiatrists and religious leaders has been a feature of some of the experiments in social psychiatry, such as those of Eric Lindeman in New England. Our president has just taken the lead toward further collaboration.

The social worker has long been a close collaborator with the psychiatrist in America.

Without displacing the social worker, the sociologist and the cultural anthropologists have more recently become working partners also, in the direct study of the social and cultural implications of mental health problems. The studies by Redlich and his collaborators at Yale provide a good illustration of the "multidisciplinary method," so-called, for the study of the social environment. Alex Leighton's project in Nova Scotia and Tom Rennie's study of an urban population in New York City are American examples of social psychiatry. Added stimulation to this social trend of psychiatric thought has come from the classical study by Stanton and Schwartz of the mental hospital as a dynamic social system.

In relation to this socio-dynamic trend, it is significant to note that in many discussions of drug therapy—e.g. chlorpromazine—special emphasis is placed upon the improvement in the social milieu of the mental hospital ward, and upon the challenge thus presented to the better use of personnel and of the social milieu for basic therapeutic purposes.

In a less mature period of American psychiatry we witnessed much dispute and rivalry between those who advocated an environmental approach and those who advocated a pharmacological approach to the management of behavior disturbances. Now we see, in a practical way, how these different approaches should not be rivals, but supplements to each other.

Here is a good point at which to raise the question, how does American psychiatry deal now with the old question of heredity and environment? In sheer bulk of psychiatric literature, the social environment receives from American psychiatrists the much greater emphasis.

In contrast, it is often remarked that the psychiatrists of the European continent have emphasized biological and hereditary factors in mental illness. The twin-studies of schizophrenic patients by Kallmann in New York have brought forcefully to the attention of American psychiatrists the probable importance of constitutional factors in the determination of schizophrenic types of reaction. Kallmann's accumulation of data has also served to clarify the point that genetic in-

fluence does not mean inevitability—that identical twins do not invariably come to the same end, thus posing the question how to make the most constructive possible use of differential life experiences and differing ways of using identical genetic endowments of combinations of favorable and unfavorable factors. At present, this question provides a topic for discussion, but we have not integrated such considerations into practical programs for action, or even for experimental investigation. The possibilities of deterioration of human material through more effective care of the constitutionally deficient, is occasionally commented upon, but there does not appear to be any concerted program toward genetic control, such as we had in the first two decades of the 20th century.

The biological aspects of psychiatry are probably due for an extensive reappraisal in the light of much recent neurophysiological investigation in America. The work of Magoun on the reticular substance has particularly aroused much interest because of its probable pertinence to clinical phenomena of anxiety and motivation and to the effects of so-called tranquilizing drugs.

The wave of interest in psychotherapy is strongly maintained and constitutes one of the marked characteristics of American psychiatry. This interest is not confined to the practical applications, but is manifested also in a fair number of studies designed to throw light on the nature of the psychotherapeutic processes. The publications by Powdermaker and Frank and their associates on their studies of group therapy provide examples of the manner in which it is possible to take advantage, for investigative purposes, of the relatively more public and exposed operations of the group, as compared to the privacy of individual psychotherapy. Special psychological interest has been focussed upon the learning process, because of its probable significance both in the therapy and in the pathogenesis of emotional illness.

One of the most distinctive recent features of American psychiatry, as observed by foreign visitors, is the large role played by psychiatrists in medical education—particularly in the "basic science" aspects. The prototype for such teaching was Adolf Meyer's course in psychobiology, in which students

were oriented by a holistic approach to human nature in illness and in health, with special attention to the existence of different levels of integration and with special emphasis upon the symbolic level. Great diversity now exists in the different medical schools in this aspect of teaching, but in general it may be said that the emphasis is upon psychodynamic, humanistic and sociological considerations in medical problems. "The patient as a person," is the key phrase. Collaboration with internal medicine, pediatrics and social service in teaching medical students constitutes a significant part of this expanded program of psychiatric instruction.

It is probably significant to say that the chief aim of such educational efforts is attitudinal rather than informational, even though that distinction may be somewhat artificial. In one experiment there was an attempt at a kind of massive group psychotherapy upon the medical students, but that plan has not been approved or followed by others.

In some measure, the efforts put into these early courses for medical students represent the desire to cultivate a humanistic approach to medical problems. Some foreign observers have seemed puzzled as to why in American medical education this aspect should be a responsibility of psychiatry. Admirers of psychiatry are likely to explain this by saying that psychiatrists are the medical specialists who have felt most keenly and have responded most adequately to the necessity of comprehending and synthesizing the fractional views of patients in a comprehensive understanding of the patient as a person. It is also stated that psychiatry got ahead of other branches of medicine in its appreciation of personality and temperament and in the practical development of methods of studying human personality.

I have expressed these points in cautious language, because I cannot quite go along with those who would claim all the credit for psychiatrists. For many years I have been deeply impressed by the human qualities shown by internists, surgeons and other specialists in their positive concern for patients' welfare and the respect and consideration they have shown to patients. One man

festation of these attitudes, which is fairly typical of American medical practice, has been the *regular* thoughtful discussions by doctors with their patients, designed to help the patient understand his medical problem and exercise wisely his freedom of choice and his possibilities for constructive partnership in medical or surgical or other measures aimed at his best health and best functioning. If we make the point that psychotherapy is a special elaboration and intensification of this procedure of talking things over, and its special application to problems of emotional difficulty and social maladjustment, we perceive a considerable unity of psychiatry with general medicine, as the role of doctor and patient have developed in the American culture. One of the most brilliant and most effective discussions of the patient as a person has been written by an eminent American internist, Francis Peabody. Psychiatrists, collaborating with others in the type of teaching which I have been discussing, have gained as well as given.

It is now a characteristic feature of Ameri-

can medical education that the psychiatric teacher starts quite early with the students and does provide considerable instruction in the basic concepts for the intelligent understanding of human behavior and human reactions of patients.

In bringing to a close this brief impressionistic sketch of American psychiatry, I should make it clear again that I have chosen to stress what have seemed to me the most distinctive features. This attempt at broad characterization should be supplemented by a look at this program of our annual meeting, and a quick mention of the numerous regional conferences, the mental health institutes devoted to the problems of the mental hospitals, and the organizational structures developed by this Association, such as the Hospital Service, the Central Inspection Board and the Architectural study project. In these ways we manifest our numerous common interests with the psychiatrists in all countries, as well as our characteristic American tendency to get organized for cooperative enterprises.

Bureau of Educational Research
1957

GROWTH AND AGING

EDWARD L. BORTZ, M.D.^{1, 2}

THE GROWING PROBLEM

For a good many years I have been interested in problems of aging, the changes in man which appear with the passage of time.

Medicine must be concerned with the deep dissatisfactions of our aging citizens; if for no other reason it is because of the spectacular increase in numbers. This is a huge problem for society to solve. It is becoming evident that the health, medical and welfare problems of our senior citizens is the number one challenge to our nation today. There is a vast amount of waste of human resources represented in the elder population, many of whom are being retired and thereby rendered inactive just at the time when their great needs are continued opportunity for employment and participation in the busy world.

The duration of life today is just about double that of a century ago. In 1930 there were 6½ million of 65-year-olds and in 1956 the number was approaching 15 million.

These elder citizens are an entirely different kind in body and vitality than the elders of an earlier day. Not only are they living longer: they are capable of retaining buoyancy and usefulness far into the higher years. Furthermore, there is high promise on the horizon that, in the next 10 years, a great deal of extremely important information concerning the most common wear and tear disorders of aging bodies will be formulated. Then, when this happens, there will be another substantial extension of the human life span.

I am unhappy because our medical leaders, especially those responsible for training doctors have, until now, shown little inclination to come to grips with this expanding issue.

Aging is a human dimension which can be measured chronologically. But more impor-

tant, biological aging is to be measured in terms of organic tissue changes, performance, repair and recession. There is rhythm in this living world, and beauty and design. Certain broad patterns are beginning to crystallize. Highly refined scientific techniques are now being developed. Man's battle with time is a problem of energy dispersion. In many ways it is now becoming possible to control the rate of human energy dispersion.

Hooton, the caustic Harvard anthropologist, had a point when he observed that medical science, instead of starting at the autopsy table and working backward, logically should begin its studies with the healthy fetus and child, then work forward. This makes sense. It seems to me we are still proceeding backward. It is a most inefficient, illogical dissipation of national resources to be training more doctors, more nurses and building more badly planned hospitals for more and more sick, unhappy, fearful and inefficient aging human beings.

We are entirely missing the great opportunity to encourage aggressively the development and flowering of human potentials. There should be fewer sick people. Our present national policy is to encourage people to get sick. Apparently it excites our compassion. We encourage them to expect security. We retire many, just when they are most productive. There is desperate need for a complete and radical about-face in our entire national philosophy regarding our aging population.

Geriatrics, a term I dislike, has slow going. Doctors shun the aged. Our medical scientists today are much fascinated by the love-life of bacteria and the excursions of electrolytes but they walk by our aging brother and look the other direction. It is true that in practically every community there is a huge need for facilities to house and feed and protect those far spent in their life journey. Our greater opportunity, and here we must sharpen our tools, is in finding ways and means to improve the physical and mental fitness of our 40-, 50-, and 60-year-olds as

¹ Guest speaker at the 16th Annual Dinner of the Devereux Foundation, during the 113th annual meeting of The American Psychiatric Association, May 13, 1957, Chicago, Ill.

² Address: 2021 West Girard Ave., Philadelphia 30, Pa.

they age; to study their performance, their opportunities and desires and particularly to keep them busy and strong; in other words to promote energetically their health potentials. There is a ferment over the land, as revealed by the creation of councils and committees on aging and mental health, which is encouraging evidence that the public is reaching out for help in its search for emotional balance and stability.

Congress has voted an initial 16 million dollars to support studies of aging alone and much more is available for mental health. Scientific psychiatry as it probes the psychodynamics of behavior is looming as the bright hope of a troubled world. There is also need for re-examination of social pathology with the newer techniques. We are sailing uncharted seas. It is a thrilling and exciting experience. The majority of medical problems have a dynamic psychic component. The time has come when general medicine and psychiatry now have a common meeting ground in the growing recognition of the mind as the measure of the man. We like to think of ourselves as rational beings. It was Benjamin Franklin, I think, who sagely observed that "the reasonable man is he who finds a reason for everything he wants to do."

Reason is usually influenced by feelings deeper than rational processes extend. Subconscious motivations exert their pressure. A healthy mind, socially focused, is the prime objective of medical practice. With passing time, from youth to age there should be a ripening, maturing sense of living.

Child guidance is an accepted procedure today. It was the psychiatrist early in the twentieth century who recommended freedom of expression for the young mind. In no way was the child to be denied the free play of all his random impulses. So we had the decades of the youth movement. The parent was subservient to the adolescent. Those in the later years were passive. And with the passage of time they became dependent on the adult children, a state of reverse responsibility. With this over-emphasis on youth there has been a cultural exclusion of the elderly. The older they grow the more isolated they tend to be. They become obso-

lescent just when they should be enjoying a greater recognition and prestige because of their maturity and social usefulness. What I want to emphasize is, that current practices and community customs depreciate the old. They in turn react by withdrawal from active pursuits. And the stage is set for the neuroses and depressions so common in the aged. With recession comes decay. Countless case histories attest the validity of this statement.

I believe an age movement is on the way which will supplement the youth movement.

With this new awareness it is possible to identify the precursors of disease. If we can estimate the physiological and psychological status of our older patients, and if we can increase their reserves there will be fewer premature breakdowns. We should, as a profession, endeavor to improve the stamina and fitness and thereby increase the capacity for performance and enjoyment of mature citizens. Merely curing the various ailments is a negative hit or miss, stop-gap practice which is woefully inefficient, expensive and unrealistic. Such a medical service falls far short in raising levels of community health. In brief, we as a profession, should become health-oriented rather than disease oriented. Concerning the potentials of our older citizens let us take from the altars of the past the fire and not the ashes.

BIOLOGICAL RHYTHMS

Studies of aging encompass the growth and development of the individual throughout the life span. Various tissues within the body have different time cycles for maturation, apparently determined by their particular usefulness to the body economy. Cowdry has shown that within a single body aging proceeds at different speeds. It is well known that practically all the tissues in the body are replaced by new material, molded in the same shape.

Gerontology is concerned with problems of growth, development and maturation, just as much as with atrophy, degeneration and decline. I see in the fascinating, continually changing processes constantly going on within the body, a balance and beauty and harmony. Human development, maturation

and aging follow a definite biological sequence. The unfolding of the life pattern, year after year, from childhood to the summit of maturity is a thing of beauty.

Nature has expressed herself in rhythmic patterns and balances. There are the recurring rhythms of the circulation, the digestive tract, of action and repose. In the mind world each of us has experienced alternating moods of elation and let-down. Warthin has emphasized the rhythm present in all aspects of human growth and development.

There appears to be a definite timetable for each tissue and organ not basically chronological, but a reflection of inherent vitality or the lack under adverse conditions. The life span of certain transient tissues, as the placenta, the ovaries and certain other glands is strictly limited. The life span of any particular body tissue differs from that of the body as a whole. There are certain tissues as described by Cowdry which are veritable fountains of youth. The cells of the bone marrow and certain cells within the eye might be classed as potentially immortal.

Few individuals attain the optimum span because of preventable human deterioration. It has been pointed out by Dr. Charles L. Dunham, Director of the Atomic Energy Commission Division of Biology and Medicine, that the early detection of tissue breakdown can now be made by radioactive isotopes pinpointing defects in the early stages. He thinks these deteriorations can be protected. For the first time scientists have an important new tool for studying growth, development and recession.

The radioactive isotope as a labelled tracer for studying the minutiae of intermediary metabolism, hormone and enzyme actions and the processes of cell regeneration, particularly of nerve cells, is a discovery of importance equal to that of the discovery of the microscope. This new procedure is already paying generous dividends. We now have at our command considerably more information of the requirements for healthy aging. It all adds up to a healthy body for many extra years. Enlarging biological patterns permits more opportunity for emotional, intellectual and spiritual growth.

A. J. Carlson commented on this when he

pointed out that, at last we are approaching an era in which man lives long enough to have time to think. In thinking he grows, and in growing, lives. In other words, he can grow as he ages.

The major dominant in human development is concerned with emotional maturity. In an article entitled "The Third Side of Growth," presented some years ago by Earl Bond, certain ideas were offered which are of especial significance today. Briefly, he called attention to physical and intellectual growth as following a fairly well accepted sequence of development. To these he added a third phase, emotional growth and maturation as the dominant force within an individual. Bond outlined in that paper the goals which modern psychiatry is hoping to achieve in the field of mental health. He stressed self-reliance, productivity, flexibility, tolerance, moderation in mood, the ability to look ahead, the ability to live on the growing edge, religious orientation, and serenity. With years added to life there is more time available for growth. This is essential in order that a final vegetative existence be avoided. Maturity then, is a dynamic phenomenon, a continuation of growth as long as health and vitality exist. Present thought indicates that with health and vitality being preserved into the higher years more time for maturation becomes available.

In one of Bernard Shaw's essays, "Back to Methuselah," he makes the point that longer life is a necessity if mankind is to survive the present civilization. Much of the social illness today is the result of immature minds. Psychological maturity is defined as the master concept of our time in a popular best seller, *The Mature Mind*, by Overstreet. The maturity concept is central to the whole business of modern life. It offers a solution for the confusions and despairs of the present day. The American Psychological Association has carried on important researches in this field. Psychology is now weighing methods of research to define the criteria of maturity.

The growth timetable may be divided into certain specific categories each of which under favorable conditions progresses through a developmental period to full maturity.

Physical maturity is defined anatomically as that period when the epiphysis and diaphysis of the long bones of the body fuse permanently. Physical growth is then completed. In lower animals there is a fairly close relationship between the period required to attain full body growth and the life span of the animal. For example, in the dog it takes 2 years for the shaft of the long bones to unite and the average span of life is 12 years, for the cat $1\frac{1}{2}$ years and the average span of life is 9 to 12 years. A horse requires $2\frac{1}{2}$ to 3 years for physical maturity and lives approximately six times three or 18 years.

If the human body attains physical maturity at approximately 25, the average span of human existence should approximate 125 to 150 years. Physical maturity is a relatively simple phenomenon and all that is required today is a well-balanced nutritional program and unimpeded opportunity for normal growth.

Intellectual growth is systematized by our school systems. Progression from one grade to another in regular sequence may be followed through college into areas of research. Intellectual maturity is attained by a fully prescribed educational program. A high degree of literacy is a mark of an advanced culture.

For emotional growth there is not the well systematized progression which the schools furnish for intellectual development. This third phase of growth should proceed to emotional maturity described as the master concept of our time. Finally, spiritual maturation is characterized by understanding, tolerance, wisdom, and religious orientation.

The growth timetable for these components of human existence are not parallel. While there is overlapping, physical maturity would seem to be followed by intellectual, emotional, and finally spiritual fulfillment. Under optimum conditions, the growth of these interdependent components should enhance the maturation of the individual.

RECHARGE MECHANISMS

To offset the diffusion of energy as time passes, the human body has an amazing ca-

capacity to renew itself. As Kubie points out, the animal body is the only machine which has a built-in replacement system, its own self-replenishing devices. In its rhythmic, changing dynamics each cell, each molecule is renewing itself, and continues even under mounting adverse conditions. Resistance to deterioration is revealed in the recuperation processes of all body cells. Experimentally seven-eighths of the liver can be removed from an experimental animal and the organ will recreate itself. An animal can be rendered diabetic by overloading with glucose or by alloxan. When the noxious agent is removed the cells return to normal, provided the insult has not lasted too long.

By attention to diet the life span of experimental animals can be doubled. Their vitality and sex potency can be preserved to an equivalent of an 85-year old woman. Homeostatic mechanisms, freed of overloading and exhaustion can maintain balanced function far beyond the average time.

What interferes with this self-perpetuating mechanism within each cell? What are the barriers to healthy aging? Suppose science solves the riddle of arteriosclerosis, cancer and nervous exhaustion? There is already exciting evidence that we are on the verge of the control of these diseases.

Numerous observers have estimated that man uses only a small portion of his physical and mental powers. If we control the diseases and deteriorations of human tissues, a fantastic future awaits us. As Kubie writes, we are at the frontier of an exciting new existence.

It is not the muscle man society needs today. If medicine is concerned with more than man's physical ailments, then the mental disorders, hopes, fears and yearnings which reveal the values each individual cherishes—these are the concerns not exclusively of psychiatry, but of the entire profession.

The new fields of psychodynamics and analysis have brought out into the open hidden purposes behind behavior. The driving forces of the individual are now coming within the sphere of objective study. These techniques are capable of revealing the barriers to man's emotional maturation.

THE SEARCH FOR DESIGN

The changing fabric of society as it reflects the impact of more and more older people is creating many vexing problems which defy traditional methods of solution. It is a curious paradox which science has created. The life span is certainly, if slowly, increasing. Citizens in the future may ordinarily live 100 years. We already have the know-how to eliminate many nuisance disorders by promoting fitness. In fact, we might well inquire at this time, what are the basic needs of each of us as we grow into the later years? I believe the three most necessary essentials are first, an adequate but limited food supply; second, the control of exhaustion; and third, a high specific motivation. These promise fitness for survival, and an enjoyable and sociable experience. Around each need there should be a generous margin of reserve. These aspects of biological experience, growth, maturation and aging are now capable of reasonably accurate measurements.

In his address as the retiring president of the American Association for the Advancement of Science in 1956, Beadle stated that man's evolutionary future, biologically and culturally is unlimited. But, far more important, it lies within his power to determine its course. Man is potentially capable of self direction. He could, to a much greater extent than he now does, consciously select his cultural objectives. He could, although he

has not yet recognized it, control his own biological future. He is now in a position to transcend the limitations that for so long have set his course. Beadle shows that to obtain biological and cultural freedom, knowledge, collective wisdom and courage, plus faith are required. In his uniqueness man is capable of attaining heights far greater than his most magnificent cultural achievements of the past.

In our increasing understanding of nuclear energy it is now known that there are hidden forces of undreamed of power within each human body and mind. In fact, atomic theory describes the atom as vibration. It can be interpreted as music, atomic energy can be equated in musical harmonies. In this way all matter is related. It in reality has religious significance. For, if energy is indestructible, then human beings continue to exist albeit in different phases.

Shelley had this in mind when, in his poem "The Cloud," the rain drop speaks:

"I am a daughter of the earth and a nursling of the sky;
I pass through the pores of ocean and shores,
I change, but I cannot die."

Above the daily routine world we are participants in a great social experience. In the presence of the awesome power now revealed to us in this atomic age, may we attain the wisdom to utilize the newly available energy so that our fellow man may walk on higher ground.

PERCEPTION AND INTERPERSONAL RELATIONS¹

HADLEY CANTRIL²

It is with a very profound feeling of humility that I, as a psychologist, offer any comments for the consideration of psychiatrists on the subject of perception and interpersonal relations. For the more one studies perception, the more one sees that what we label "perception" is essentially a process which man utilizes to make his purposive behavior more effective and satisfying, and that this behavior always stems from and is rooted in a personal behavioral center. Thus perception involves numerous aspects of behavior which we rather artificially and necessarily differentiate in order to get a toe-hold for understanding, but which, in the on-going process of living, orchestrate together in a most interdependent way.

This means, then, that the nature of perception can only be understood if somehow we manage to start off with what some of us call a "first person point of view" as contrasted to the "third person point of view" represented by the traditional psychological investigator. And so my very genuine feeling of humility in accepting an invitation of psychiatrists derives from the fact that the psychiatrist, perhaps more than any other specialist concerned with the study of human beings, is primarily concerned with the first-person point of view, is skilled in the art of uncovering what this may be for his patient, and knows from his own experience the wide gap that exists between this first-person experience and the abstractions we have created as scientists in order to analyze, conceptualize, and communicate. A very nice expression of this last state of affairs was, incidentally, recently made by Aldous Huxley in his book *The Genius and the Goddess*:

"What a gulf between impression and expression! That's our ironic fate—to have Shakespearian feelings and (unless by billion-to-one chance we happen to be Shakespeare) to talk about them like automobile salesmen or teen-agers or college professors.

We practice alchemy in reverse—touch gold and it turns to lead; touch the pure lyrics of experience, and they turn into the verbal equivalents of tripe and hogwash."

BACKGROUND

Most of you are probably familiar to some extent with a point of view that has developed rather recently in psychology and has been dubbed "transactional psychology." While I do not want to spend time here repeating what has been published in a variety of sources, I might at least very briefly note some of the major emphases of transactional psychology before discussing certain aspects and some experimental results which may be of particular interest to psychiatrists (1, 2, 3, 4).

Here, then, are some of the emphases of transactional psychology which may give us a take-off for discussion:

Our perception depends in large part on the assumptions we bring to any particular occasion. It is, as Dewey and Bentley long ago pointed out, not a "reaction to" stimuli in the environment but may be more accurately described as a "transaction with" an environment.

This implies that the meanings and significances we assign to things, to symbols, to people, and to events are the meanings and significances we have built up through our past experience, and are not inherent or intrinsic in the "stimulus" itself.

Since our experience is concerned with purposive behavior, our perceptions are learned in terms of our purposes and in terms of what is important and useful to us.

Since the situations we are in seldom repeat themselves exactly and since change seems to be the rule of nature and of life, our perception is largely a matter of weighing probabilities, of guessing, of making hunches concerning the probable significance or meaning of "what is out there" and of what our reaction should be toward it, in order to protect or preserve ourselves and our satisfactions, or to enhance our satisfac-

¹ Read at the A.P.A. Regional Meeting in Montreal, Nov. 8-11, 1956.

² Address: Institute for International Social Research, 240 Nassau Street, Princeton, New Jersey.

tions. This process of weighing the innumerable cues involved in nearly any perception is, of course, a process that we are generally not aware of.

CREATING CONSTANCIES

Since things in the world outside us—the physical world and more especially the social world—are by no means static, are not entirely determined and predictable, experience for most of us often carries at least some mild overtone of “concern” which we can label “curiosity,” “doubt” or “anxiety” depending on the circumstances involved.

One of my favorite illustrations of this point is an incident described by Carl Sandburg in his autobiography, *Always the Young Strangers*.

“I have always enjoyed riding up front in a smoking car, in a seat back of the ‘deadheads,’ the railroaders going back to the home base. Their talk about each other runs free. . . . Once I saw a young fireman in overalls take a seat and slouch down easy and comfortable. After a while a brakeman in blue uniform came along and planted himself alongside the fireman. They didn’t say anything. The train ran along. The two of them didn’t even look at each other. Then the brakeman, looking straight ahead, was saying, ‘Well, what do you know today?’ and kept looking straight ahead till suddenly he turned and stared the fireman in the face, adding, ‘For sure.’ I thought it was a keen and intelligent question. ‘What do you know today—for sure?’ I remember the answer. It came slow and honest. The fireman made it plain what he knew that day for sure: ‘Not a damn thing’ . . .”

Thus we seldom can count on complete 100% surety in terms of a perfect correspondence between our assumptions concerning the exact experience we may have if we do a certain thing and the experience we actually do have as the consequence of the action we undertake.

In an attempt to try to minimize our potential lack of surety concerning any single occasion and thereby maximize our sense of surety concerning the effectiveness of our action in achieving our intent, we build up “constancies” and begin to count on them. While a great deal of experimental work has been done on “constancies” in the psychological laboratory, we still have much more to learn. And above all, we have a great deal to learn about constancy as we

extend this concept into the field of our interpersonal relations.

Parenthetically, one of the most important things we have to learn is that the “constancy” we create and that we describe usually by means of some word, symbol, or abstract concept is man’s creation, the validity of which can only be tested and the meaning of which can only be experienced in terms of some behavior which has consequences to us and signals to us what the concept refers to.

We create these constancies by attributing certain *consistent* and *repeatable* characteristics to what they refer to, so that we can guess with a fair degree of accuracy what the significances and meanings are of the various sensory cues that impinge upon us. We do this so that we will not have to make fresh guesses at every turn.

These significances we build up about objects, people, symbols, and events, or about ideas all orchestrate together to give us what we might call our own unique “*reality world*.” This “reality world” as we experience it includes, of course, our own fears and hopes, frustrations and aspirations, our own anxiety and our own faith. For these psychological characteristics of life—as the psychiatrist knows better than anyone else—are just as real for us in determining our behavior as are chairs, stones or mountains or automobiles. It seems to me that anything that takes on significance for us in terms of our own personal behavioral center is “real” in the psychological sense.

ASSIGNING SIGNIFICANCES

Let me illustrate with reference to a few recent experiments the way in which the significance we attach to others “out there” seems to be affected by what we bring to the situation. Incidentally but important: I do want to underscore that the experiments mentioned here are only exploratory; are only, I believe, opening up interesting vistas ahead. I am in no sense attempting to indicate what their full theoretical implications may be. But I mention them to show how experiments designed to get at the first person point of view may suggest to the experienced psychiatrist ways of using experimen-

procedures in his diagnosis and possibly in therapy. And I also mention them because of my deep conviction that psychology can be both humanistic and methodologically rigorous.

A whole series of most promising experiments now seems possible with the use of a modern adaptation of an old-fashioned piece of psychological equipment, the stereoscope. Dr. Edward Engel who devised the apparatus has already published a description of it and reported some of his first findings(5). As you know, the stereoscope in a psychological laboratory has been used to study binocular rivalry and fusion but the material viewed almost always consisted of dots and lines or geometrical patterns. Engel was curious to see what would happen if meaningful figures were used instead of the traditional material.

The results are really most exciting. In Engel's experiments he prepares what he calls "stereograms" consisting of photographs 2×2 inches, one of which is seen with the left eye, the other with the right. The photographs he used first were those of members of the Princeton football team just as they appeared in the football program. Although there were slight differences in the size and position of the heads and in the characteristics of light and shadow, still there was sufficient superimposition to get binocular fusion. And what happens? A person looks into the stereoscope and sees one face. He describes this face. And it almost invariably turns out that he is describing neither the face of the man seen with the left eye nor the face of the man seen with the right eye. He is describing a new and different face, a face that he has created out of the features of the two he is looking at. Generally the face seen in this particular case is made up of the dominant features of the two individuals. And generally the face created by the observer in this situation is more attractive and appealing than either of those seen separately. When the observer is shown the trick of the experiment by asking him to close first one eye and then the other and to compare the face he originally saw with the other two, he himself characterizes the face he created as more handsome, more pleasant, a fellow he'd like better, etc.

I hasten to add, however, that we should by no means jump to the conclusion that an individual picks out the "best" or "most attractive" features of figures presented to him in a situation of binocular fusion. For example, Professor Gordon Allport recently took one of Engel's stereoscopes with him to South Africa and initiated some experimental work there, using photographs of members of the different racial groups which make up that complex community.

While the experiments in South Africa have only just begun and no conclusion should be drawn, it is significant to note that in recent letters communicating the early results, Allport reported that when the stereograms consist of a European paired with an Indian, a colored person compared with an Indian, etc. the Zulus see an overwhelming preponderance of Indians. For the Zulu is most strongly prejudiced against the Indian who represents a real threat to him. Allport also reports that when Europeans in South Africa view the stereogram they tend to see more colored faces than white. It would seem, then, that a person sees what is "significant," with significance defined in terms of his relationship to what he is looking at.

One pair of slides we use in demonstrating this piece of equipment consists of two stereograms, each a photograph of a statue in the Louvre. One of the statues is that of a Madonna with Child, the other a lovely young female nude. While I am unable so far to predict what any given individual will "see," no doubt such a prediction might be made after some good psychiatric interviewing. But let me describe what happened in a typical viewing of these stereograms. The viewers happened to be two distinguished psychologists who were visiting me one morning, one from Harvard, the other from Yale. The first looked into the stereoscope and reported that he saw a Madonna with Child. A few seconds later he exclaimed, "But my God, she is undressing." What had happened so far was that somehow she had lost the baby she was holding and her robe had slipped down from her shoulders and stopped just above the breast line. Then in a few more seconds she lost her robe completely and became the young nude. For this particular professor, the nude never did get

dressed again. Then my second friend took his turn. For a few seconds he could see nothing but the nude and then he exclaimed, "But now a robe is wrapping itself around her." And very soon he ended up with the Madonna with Child and as far as I know still remains with that vision. Some people will never see the nude; others will never see the Madonna if they keep the intensity of light the same on both stereograms.

In the situation described above, we do not have conditions for genuine fusion, but rather a condition which introduces conflict and choice in the possible meaning of the content represented. In order to learn whether or not there might be differences in choice that would be culturally determined, a cross cultural comparison was made by Dr. James Bagby (6). He constructed pairs of stereograms that would create binocular rivalry: in one stereogram of each pair he had a picture of some individual, object or symbol that would be of particular interest to Mexicans; in the other stereogram he had a picture that would be of particular significance to Americans. For example, one pair of slides consisted of a picture of a bull fighter matched with a stereogram picturing a baseball player. When these pairs were shown to a sample of Mexican school teachers, an overwhelming proportion of them "saw" the Mexican symbol; when the same slides were presented to a group of American school teachers, the overwhelming proportion "saw" the American symbol.

Incidentally, the Engel stereoscope is so constructed that one can get some idea of the relative "strength" of each of the stereograms by adjusting the intensity of the lighting on each. Hence, if the lighting is equivalent on two stereograms in a rivalry situation, one can reduce the amount of lighting on the one that originally predominates, increase the amount of light on the one that was not "seen" and find the point where the first one disappears and the second one "comes in."

A modification of the stereoscope has just been completed by Mr. Adlerstein in the Princeton laboratory. Our thought was that it might be extremely useful both in the clinical and social areas, if instead of having to use photographs of objects or people, a person could view the real thing—that is, the

faces of real, live individuals or pairs of actual objects. So by means of prisms and mirrors, this device was constructed and I have only very recently had the opportunity of experiencing the resulting phenomena. I must say it is strange and wonderful. For example, when I viewed Mr. Adlerstein and Mrs. Pauline Smith, Curator of our Demonstration Center, I seemed to be looking at a very effeminate Mr. Adlerstein who was wearing Mrs. Smith's glasses. Though weird, he was extremely "real." At one point while I was observing them Mrs. Smith began to talk yet it was Adlerstein's lips that were moving! Tingling with excitement and with a certain amount of anxiety, I drove home and asked my wife and daughter to come down to the laboratory so that I could take a look at them. I was, of course, fearful that I might see only one or the other. But fortunately, again I got an amazing fusion—a quite real and lovely head composed of a blending of my daughter's hair and chin and my wife's eyes and mouth—an harmonious composition that would do justice to any artist and which I created almost instantaneously and without any awareness of what was going on. These pieces of apparatus seem to me to have enormous potential usefulness for studying the way in which we create the world around us. I am hoping, for example, that before long someone in a position to do so may use this sort of equipment in a study of disturbed children. The child—having two eyes and two parents—might in some situations and in a very few seconds reveal a good bit about his inner life and his interpersonal family relations.

An interesting series of experiments on perception and interpersonal relations began systematically a few years ago after an observation I made one Sunday morning in our laboratory. An old friend of mine, who was a distinguished lawyer in New York and has since died, called me at home to say that he and his wife had been in town for the weekend and would I be willing to show them some of the Ames' demonstrations about which he had heard. It is important for this story to emphasize the fact that the gentleman in question was really a most unusual man in terms of his ability, charm,

accomplishments, and his devotion to his family and friends.

Many of you are familiar, I am sure, with the "distorted room" designed by Adelbert Ames, Jr. which produces the same image on the retina as a regular square room if it is viewed monocularly from a certain point. Since the room is seen as square, persons or objects within the room or people looking through the windows become distorted. I had shown this room to hundreds of individuals and among other phenomena had demonstrated that when two people look through the back windows, the head of one individual appeared to be very large, the head of the other to be very small. When the individuals reversed the windows they were looking through, the size of their heads appeared to the observer to change. But on this Sunday morning when my friend's wife was observing him and me, she said, "Well, Louis, your head is the same size as ever, but Hadley your head is very small." Then we changed the windows we were looking through and she said, "Louis, you're still the same, but Hadley you've become awfully large." Needless to say this remark made a shiver go up my spine and I asked her how she saw the room. It turned out that for her—unlike any other observer until then—the room had become somewhat distorted. In other words, she was using her husband—to whom she was particularly devoted—as her standard. She would not let him go. His nickname for her was "Honi" and we have dubbed this the "Honi phenomenon."

This observation was followed systematically in a series of experiments on married couples by Dr. Warren Wittreich. He found that if couples had been married less than a year there was a very definite tendency not to let the new marital partner distort as quickly or as much as was allowed by people who had been married for a considerable time (7). But, again, I hasten to add that it is not a simple matter of how long one has been married that determines how willing one is to distort the size or shape of one's marital partner! The original observation was made on a couple who were already grandparents. Preliminary investigation also seems to show that parents of young children will

not allow their children to distort as readily as will parents of older children.

We could continue at some length reporting experiments which seem to show that what we "perceive" is, as already emphasized, in large part our own creation and depends on the assumptions we bring to the particular occasion. We seem to give meaning and order to sensory impingements in terms of our own needs and purposes and this process of selection is actively creative.

SOCIAL CONSTANCIES AND SELF-CONSTANCY

It is clear that when we look for constancies in other people either as individuals or as members of a group a variety of complications is introduced. For when people are involved, as contrasted to inorganic objects or most other forms of life, we are dealing with purposes, with motives, with intentions which we have to take into account in our perceptual process—the purposes, motives and intentions of other people often difficult to understand. The purposes and intentions of these other people will, of course, change as conditions change; and they will change as behavior progresses from one goal to another. Other people's purposes will be affected by our purposes, just as our purposes will be affected by theirs.

It is by no means a quick and easy process, then, to endow the people with whom we participate in our interpersonal relations with constancies and repeatabilities that we can always rely on. And yet we must, of course, continue the attempt to do so, so that our own purposeful action will have a greater chance of bringing about the satisfying consequences we intended. So we try to pigeonhole people according to some role, status, or position. We create constancies concerning people and social situations. These provide us with certain consistent characteristics that will ease our interpretation and make our actions more effective so long as there is some correspondence between the attribution we make and the consequence we experience from it in our own action.

The "social constancies" we learn obviously involve the relationships between ourselves and others. So if any social constancy is to be operational, there must also be a

sense of "self-constancy." The two are interdependent. Since the human being necessarily derives so much of his value satisfaction from association with other human beings, his conception of his "self," his own "self-constancy" and "self-significance" is determined to a large extent by the significance he has to other people and the way they behave toward him. This point is, of course, a familiar one to the psychiatrist and has been eloquently illustrated in literature as, for example, in Shaw's *Pygmalion*.

But it seems to me of paramount importance in any discussion of perception and interpersonal relations that we should not slip into the error of positing an abstract "self" or "ego" that can somehow be isolated, pointed to, analyzed, or experienced apart from any social context. It is only through the life setting and the process of participation with others that meaning and continuity are given to the "self." If the constancy of "self" is upset, it becomes difficult for us to assess changes in our interpersonal relations and accommodate to them. We lose the compass that keeps us going in a direction. "We" are lost.

This does not mean in any sense that for self-constancy to be maintained there can be no development or growth. On the contrary, self-development and growth are themselves aspects of social constancy. But this development must, as the psychiatrist knows better than anyone, flow from form if it is to be recognized, if there is to be continuity, and if there is to be a standard for comparison. Obviously, each of us surrounds himself with anchoring points of one kind or another which help to maintain this self-constancy in the process of ceaseless change around us. In this connection I think, for example, of Konrad Lorenz' interpretation of why people like dogs. In his book *King Solomon's Ring*, he writes that we should "not lie to ourselves that we need the dog as a protection for our house. We *do* need him, but not as a watch-dog. I, at least in dreary foreign towns, have certainly stood in need of my dog's company and I have derived, from the mere fact of his existence, a great sense of inward security, such as one finds in a childhood memory or in the pros-

pect of the scenery of one's own home country, for me the Blue Danube, for you the White Cliffs of Dover. In the almost film-like flitting-by of modern life, a man needs something to tell him, from time to time, that he is still himself, and nothing can give him this assurance in so comforting a manner as the 'four feet trotting behind.'"

This interdependent problem of social constancy and self-constancy has been submitted to some preliminary investigation. For example, when a person is wearing a pair of aniseikonic spectacles, which greatly distort the shape of the environment when familiar monocular cues are ruled out, he will generally see another person as distorted if that person is standing in an environment which has itself already become distorted. With a certain pair of these spectacles, for example, an individual will be seen as leaning forward with the upper and lower half of his body distorted in length. Dr. Wittreich set up such a situation at the Naval Training Center at Bainbridge, Maryland to see what might happen when the relationship of the person who was doing the viewing and the person being viewed was altered. His subjects were 24 white male Navy recruits. They first observed an authority figure dressed up as a first class petty officer and, second, a non-authority figure dressed up in a white enlisted uniform with the marks of a recruit. Wittreich found that the authority figure did not distort nearly as much as the non-authority figure. In other words, the disciplinary training imposed in an organization that depends for effective functioning on the rigid acceptance of roles had produced a "constancy" which overpowered physiological changes in the optical system.

Another finding using the aniseikonic spectacles may be of interest to psychiatrists: namely, that a person tends to report much less distortion of his own image when he looks at himself in a full length mirror while wearing aniseikonic spectacles than he reports when he is looking at a stranger. When one looks at one's self, the changes that appear seem to be minor and detailed—for example, slight distortions in the hands or feet; when one looks at a stranger, there is the more general bodily distortion plus the

leaning one way or another, depending on the kind of spectacles used.

A subsequent study by Wittreich and one which I emphasize is only suggestive, was made comparing 21 subjects obtained from the patient roster of the neuro-psychiatric unit at the Bethesda Naval Hospital. When these disturbed individuals were wearing aniseikonic spectacles and saw their own image in the mirror, they tended to see the gross distortions that the "normal" population attributed to others; and, conversely, when the disturbed clinic population looked at others, they tended to see the more detailed and minor distortions which the "normal" population had seen in themselves. All I should like to conclude about this particular experiment so far is that there seems to be some difference between the normal individual and the clinical patient in the functional importance assigned to his bodily image; the patient may conceivably be operating in terms of a relatively fixed and homogeneous image of himself which does not alter readily with the demands of the environment.

PERCEPTUAL CHANGE

Laboratory experimentation as well as research in the field of opinion and attitude change seems to demonstrate beyond a shadow of a doubt that the major condition for a change in our perception, our attitudes or opinions is a frustration experienced in carrying out our purposes effectively because we are acting on the basis of assumptions that prove "wrong." For example, Dr. Kilpatrick has demonstrated that apparently the only way in which we can "learn" to see our distorted room distorted is to become frustrated with the assumption that the room is "square" in the process of trying to carry out some action in the room (8). It is clear that an "intellectual," "rational," or "logical" understanding of a situation is by no means sufficient to alter perception. The psychotherapist has taught us how successful reconditioning requires a therapy which simplifies goals so that their accomplishment can be assured through an individual's action as he experiences the successful consequences of his own behavior and thereby rebuilds his confidence in himself.

In this connection I recall a conversation I had in 1948 in Paris with an extremely intelligent woman who was at that time a staff member of the Soviet Embassy in Paris. We were at some social gathering and she began to ask me about American elections and the two-party system. She just couldn't understand it. She wasn't trying to be "smart" or supercilious. She was simply baffled. She couldn't "see" why we had to have 2 parties. For, obviously, one man was better than another and why wasn't he made President and kept as President as long as he proved to be the best man? It was a difficult argument for me to understand, just as my argument was impossible for her to understand. It was much more than a matter of opinion, stereotype or prejudice on either side. We were simply living in different reality worlds, actually experiencing entirely different significances in happenings which might appear to "an objective" "outside" observer to be the same for both of us.

Parenthetically, while one of the outstanding characteristics of man is often said to be his amazing capacity to learn, it seems to me that an equally outstanding characteristic is man's amazing capacity to "unlearn" which is, I think, not the exact opposite. Because man is not entirely a creature of habit, he has the fortunate ability to slough off what is no longer of use to him.

THE REALITY OF ABSTRACTIONS AND THE COMMONNESS OF PURPOSES

In order to ease our interpersonal relations and to increase the commonness of the significances we may attribute to the happenings around us, man has created abstractions in his attempt to bring order into disorder and to find more universal guides for living no matter what the unique and individual purposes and circumstances of an individual may be. Such abstractions are represented by our scientific formulations, our ethical, political, legal and religious systems. The abstractions can be recalled and repeated at will. They can be communicated. They are repeatable because they are static and have fixed characteristics.

The value of these abstractions for us in our interpersonal relations seems to be that

when the tangibles of our personal reality world break down, we can turn to the intangible—to the abstractions we have learned that have been created by others and have presumably proved useful to them. We can begin to check our own particular situation, possibly a frustrating one, against the abstraction and thereby, perhaps experience for ourselves what the abstraction is referring to. Only then will the abstraction become real for us. For when it does become functional for us in our own individual lives, it is real as a determinant of our experience and behavior.

I will close this discussion of perception and interpersonal relations with a story which seems to sum a good deal of what I have been talking about. The story concerns three baseball umpires who were discussing the problems of their profession. The first umpire said, "Some's balls and some's strikes and I calls 'em as they is." The second umpire said, "Some's balls and some's strikes

and I calls 'em as I sees 'em." While the third umpire said, "Some's balls and some's strikes but they ain't nothin' till I calls 'em."

BIBLIOGRAPHY

1. Cantril, Hadley. The "Why" of Man's Experience. New York: Macmillan, 1950.
2. Kilpatrick, F. P. (ed.). Human Behavior from the Transactional Point of View. Hanover, N. H.: Institute for Associated Research, 1952.
3. Kilpatrick, F. P. Recent Transactional Perceptual Research, a summary. Final Report, Navy Contract N6onr 27014, Princeton University, May, 1955.
4. Cantril, Hadley. ETC: A Review of General Semantics, 12: No. 4, 278, 1955.
5. Engel, Edward. Amer. J. Psychol., 69: No. 1, 87, 1956.
6. Bagby, James. A Cross Cultural Study of Perceptual Predominance in Binocular Rivalry. 1956 (to be published).
7. Wittreich, Warren. J. Abnorm. Soc. Psychol., 47: 705, 1952.
8. Kilpatrick, F. P. J. Exp. Psychol., 47: No. 5, 362, 1954.

EXPERIENCE WITH PHOTIC STIMULATION IN PSYCHIATRIC RESEARCH^{1, 2}

GEORGE A. ULETT, M.D.³

In a search for physiological factors underlying those mental disorders currently classified as "... without clearly defined physical cause ..." an intermittent photic stimulus has been used in conjunction with electroencephalographic recording. Such an investigative technique permits a study of the brain in action—responding to a stimulus—in contrast with investigations of the brain at rest. This approach has seemed promising for the study of behavioral disorders where symptoms may be the result of a dysfunctioning brain. (A discussion of preliminary work with this method(21) and a review of the recent literature(3) are available.)

Our initial observations had suggested that subjects, considered by psychological and psychiatric observation to show borderline adjustment or frank maladjustment, displayed a greater brain wave driving response when stimulated by frequencies of 20 to 30 f.p.s. than by frequencies under 20 f.p.s., and showed a marked harmonic response to stimulation in the 10 to 15 f.p.s. band. We pursued this lead with another study of 191 subjects(26). By utilizing an electronic brain wave analyser it was possible to quantify the electroencephalographic response of the subjects to flicker at 24 frequencies of light stimulation ranging from 3 to 30 f.p.s. The past and present history of symptoms suggesting anxiety or behavioral maladjustment of all subjects were studied and each

subject was given a rating of proneness to develop anxiety under stress. This "anxiety-proneness" rating was found to be significantly correlated with 1:1 and/or harmonic response to flashing light at frequencies above the alpha range. This finding seemed in accord with reports in the literature of an increased amount of fast activity in the basic resting electroencephalographic patterns of patients with anxiety reactions. It appeared that a latent tendency to such fast activity was indicated by the induction of a strong driving response by the appropriate fast frequency of photic stimulation. In similar thought, the evocation of a paroxysmal response at a subharmonic of the light stimulus in some epileptics has been reported as indicative of a latent tendency to slow activity by Mundy-Castle(15). A second sample of 117 patients however, was run in like fashion and although the photic driving response at both high and low frequencies tended to be greater among the anxiety prone, the discriminating value of the test in this sample now lacked statistical significance. The relationship of cortical response to photic stimulation and anxiety is at this time an unsettled question.

In both of the above studied groups however, there was seen, in anxiety-prone individuals, a significantly greater amount of subjective dysphoria, visceral sensations and/or anxiety during exposure to photic stimulation. This, in our experience, is not an unusual occurrence during such stimulation(20) and may, in some persons, seem to reactivate symptoms, often of a neurotic nature, that have been experienced in the past. The use of an intermittent photic stimulus as a provocative test for such sensations in the screening of military personnel for the selection of anxiety-prone subjects was explored with some success in our control population. Further study and evaluation of these observations is presently being undertaken on a group of some 1,500 air cadets whose subsequent careers and exposure to stress in military situations can be followed(18).

¹ Read at the 112th annual meeting of The American Psychiatric Association, Chicago, Ill., April 30-May 4, 1956.

² The studies mentioned in this report were completed under Air Force Contracts 33(638)-1384 and 18(600) 627 of a series under R and D Project 21-37-062, Division of Psychiatric Screening of Flying Personnel, Department of Clinical Psychology, U. S. Air Force School of Aviation Medicine, and through research grants from the National Institute of Mental Health of the National Institutes of Health, U. S. Public Health Service.

³ Department of neurology and psychiatry, Washington University School of Medicine, and research laboratories of Malcolm Bliss Psychiatric Hospital, St. Louis, Mo.

The use of field performance was felt to be the only practicable validating criterion of the selective value of this method for use in a military screening battery. This conclusion was reached when, in an attempt to increase the validity of our psychiatric-psychologic anxiety-proneness rating, we introduced in place of one, two experienced board certified clinical psychiatrists only to find that their agreement upon both anxiety-proneness and maladjustment ratings in a control population was very poor(6).

Other investigators have explored this area of relating photic stimulation to personality variables. Blum(1) reported an EEG response to photic stimulation that was characteristic of schizophrenics and patients with organic brain syndrome that was not seen in "normal" controls. Shagass(19) used the EEG response to photic stimulation to differentiate between patients showing either mainly anxiety symptoms or depression. He compared the response to 15 and 10 flashes per second and found a greater response at the faster frequency in those subjects with anxiety. Further observations in his laboratory suggested that in persons repeatedly tested, the driving response would fluctuate from day to day with changes in mood and that the driving response at 15 flashes per second was highest during times of anxiety or annoyance. Such fluctuation of the driving response with transient mood change was in the opposite direction to that found in our studies where a test situation (23) that was frustrating, annoying and often anxiety provoking, produced in most subjects a temporary decrease in the driving reaction to 14 flashes per second which increased again when the experimental anxiety producing stimulus was withdrawn. The differences were not clearly seen in all individuals however, and the experimental situation could not be said to produce purely an anxiety response in all persons.

There is certainly a need for more basic knowledge regarding this phenomenon of photic driving. There has, for example, been presented no careful profile analysis of the photic driving response taken over a period of weeks or months to note the consistency of response at different frequencies. Such a study is basic to the selection of the best

stimulus frequencies for correlative studies of fluctuations in driving with mood or psychic phenomena. To begin work in this area we have plotted the electronically analysed EEG driving profiles of 171 subjects stimulated at 24 different flicker frequencies. The median driving curve and first and third quartile curves for the group are shown (Fig. 1). The marked difference among individuals is shown by the wide range indicated here.

To study the stability of the driving measure we are repeating the procedure on a selected group of 50 subjects at spaced intervals two to three times a year for a 3-year period. Preliminary analysis of data on 12 subjects reveals that the shape of the driving curve is generally consistent for one individual from time to time with an average intraclass correlation of .67 with the range of correlations from .10-.84 for the 3 trials. However the amount of total driving (*i.e.*, "energy") of the response is more variable, showing an intraclass correlation of only .46. Both of these correlations would occur by chance less than 1 time in 100. The curves of two subjects indicating the driving profile as seen on 3 different occasions are shown as an example (Figs. 2 and 3). Figure 4 illustrates a subject in whom both profile and amount of response varied over the 3 trials. A complete report of this work is in progress.

In an earlier study(12) we compared and found relationships between color, movement and FK responses on the Rorschach and similar subjectively experienced color, movement and depth or vista sensations experienced during exposure to intermittent photic stimulation. A relationship was also found between simple and limited descriptions of the flicker induced sensations and a Rorschach perceptual style that has been designated as suggestive of rigidity in the personality structure(8).

Specific ability of certain frequencies to produce both physiological and psychological phenomena and to reproduce clinical symptomatology is, although unexplained, of great interest. Lovett Doust(11) has shown that shifts in blood oxygen saturation tend to occur at certain specific frequencies of photic stimulation. Walter(30) earlier described, and we have noted time and again, that for

MEDIAN DRIVING RESPONSE TO PHOTIC STIMULATION WITH FIRST AND THIRD QUARTILE POINTS.

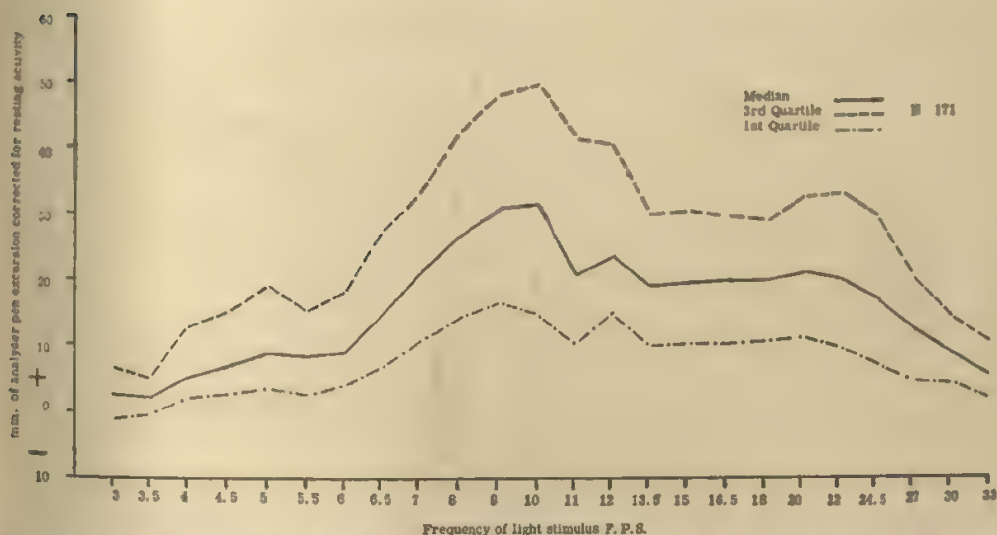


FIG. 1.—Curves illustrating the median driving response together with the first and third quartile points of 171 subjects tested at 24 frequencies of photic stimulation. The data are based on electronic EEG analyser summations of the Rt. Parieto-occipital lead combinations during 40 consecutive seconds of stimulation at each frequency.

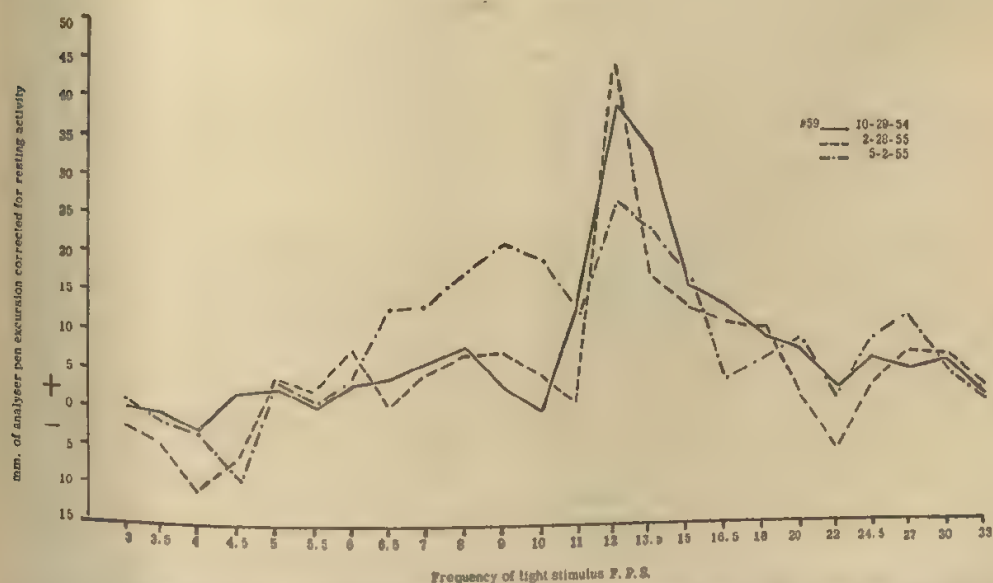


FIG. 2.—Curves made from electronically analysed Rt. Parieto-occipital EEG recording data illustrating the profile of EEG driving response to stimulation at each of 24 different frequencies of light stimulus presented to control subject #59 on 3 separate occasions. This subject was a male student, 22 years of age with a normal resting EEG and no personal or family history of neuropsychiatric disturbance.

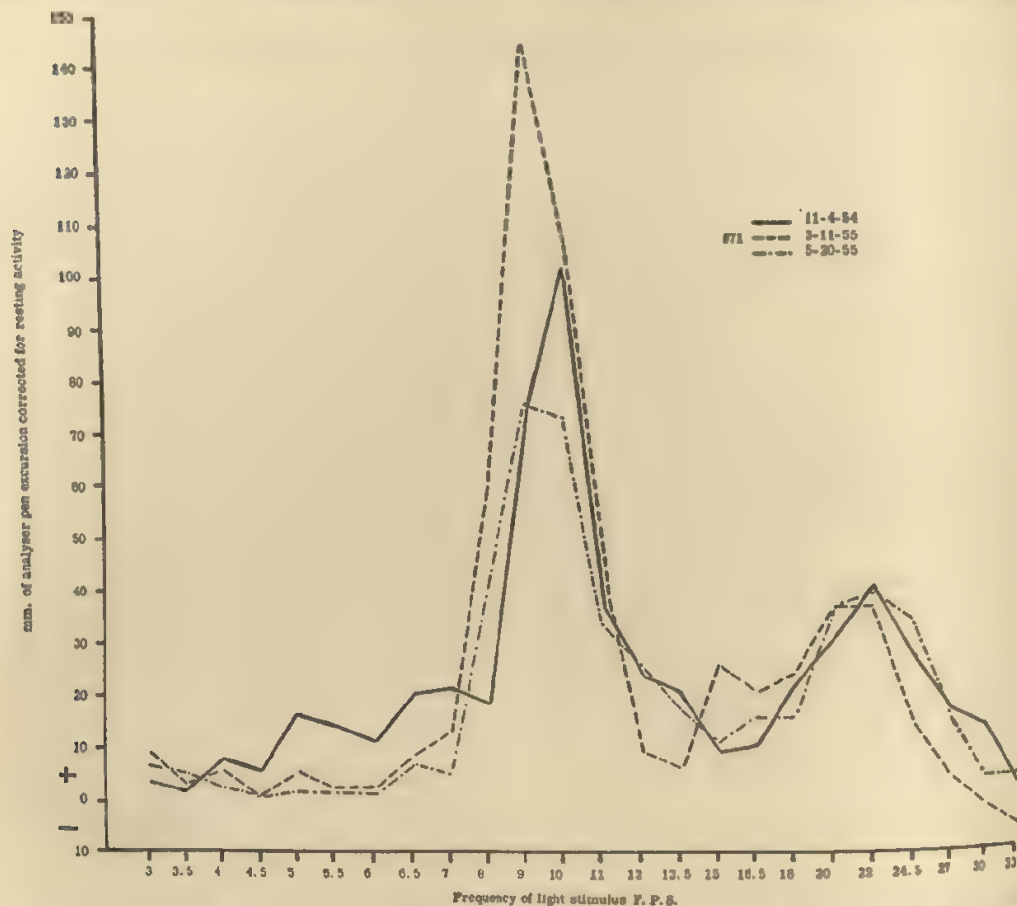


FIG. 3.—Curves made from electronically analysed Rt. Parieto-occipital EEG recording data illustrating the profile of EEG driving response to stimulation at each of 24 different frequencies of light stimulus presented to control subject #71 on 3 separate occasions. This subject was a male student 22 years of age with a normal resting EEG. The only positive item in his neuropsychiatric examination was a possible febrile convulsion in childhood.

some individuals subjective dysphoria, myoclonus or paroxysmal activity in the EEG would occur only, or mainly, at certain frequencies, and at times to a lesser degree at related harmonics or subharmonics of such frequencies. Mundy-Castle(16) reported a case in which photic stimulation at certain critical frequencies produced both irregular slow bursts in the EEG and visual hallucinations related to past experiences. Following a course of insulin coma treatments photic stimulation elicited neither the hallucinations nor the abnormal EEG changes.

Similarly a specificity of stimulus frequency or elicitation of response by frequencies within a limited band has been seen in selected epileptics. Those individuals who

do not have evident convulsive disorder, but whose EEG can be induced to show paroxysmal activity at certain frequencies of photic stimulation, raise speculation regarding a lowered convulsive threshold and predisposition to clinical seizures. Such photically induced changes have been reported in subjects without personal or family history or clinical findings that would suggest either psychiatric or convulsive disorder(28). Buchthal and Lennox(2) found photic stimulation of some use in detecting latent convulsive disorder but felt that the procedure was less useful in this regard than Metrazol activation. We have seen both EEG and clinical paroxysms induced in subjects by light alone, when the neurological examination and personal and

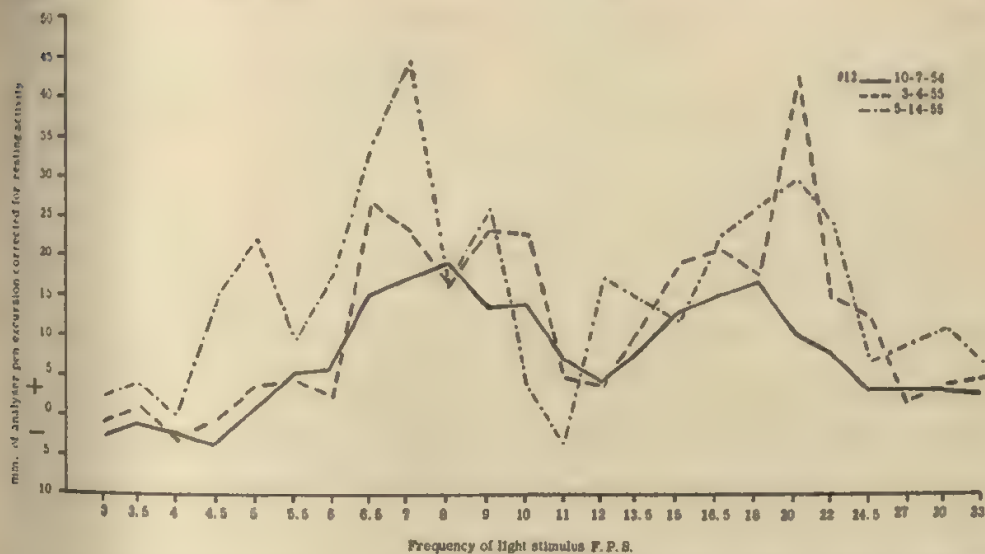


FIG. 4.—Curves made from electronically analysed Rt. Parieto-occipital EEG recording data illustrating the profile of EEG driving response to stimulation at each of 24 different frequencies of light stimulus presented to control subject #12 on 3 separate occasions. The subject was a male student, 22 years of age, with a normal resting EEG. The only positive item in his neuropsychiatric examination was a questionable concussion during college boxing.

family history were negative for convulsive and neuropsychiatric disorder. This has been puzzling and poses the question whether sensitivity to intermittent light stimulus (*i.e.*, production of paroxysmal EEG activity) may indicate a low threshold for convulsive seizures in some and in others indicate a physiologic or sensory lability that might relate to behavior disturbance or even susceptibility to psychogenic disorder. We searched within our normal control group for indications that EEG activation might, of itself, relate to a positive personal or family history or to symptoms of neuropsychiatric disorder but in this group, studied by careful interview and neurological examination, the search does not look promising.

Studies by Leiberman(9) et al., Gastaut (4), Hill(7) and others have implied that a lowered photo-pharmacologic convulsive threshold exists in schizophrenics and possibly in certain cases of hysteria and that it may indicate some common, sensitive diencephalic neural mechanism that responds to the photic stimulus similarly in both groups of patients. A careful review of these and other studies reveals a considerable problem in the interpretation of an endpoint for convulsive threshold when induced by means of

photic stimulation following the injection of small amounts of a convulsant drug(24). It seemed to us that before measuring convulsive thresholds in a carefully defined group of schizophrenics, some attention should be given to methodology. Hence we have investigated and reported a method of threshold measurement using hexazole and photic stimulation that seems to have a high reliability and validity. A study is now in progress in our laboratory using this method to compare the convulsive threshold of carefully selected schizophrenics and a matched control group. Although the results are as yet incomplete, no difference has so far been found between the two groups. We have no ready explanation of why our findings in this area should differ from those of other workers although we would point out that alterations in metabolism can produce a marked change in sensitivity to photic stimulation. (Fig. 5 shows samples of an EEG from a control subject with a normal basic EEG. In the first instance he was subjected to photic stimulation after 30 hours of sleep deprivation and when he had been without food for 12 hours. At this time he showed marked clinical myoclonus and paroxysmal activity in the EEG. On the same day fol-

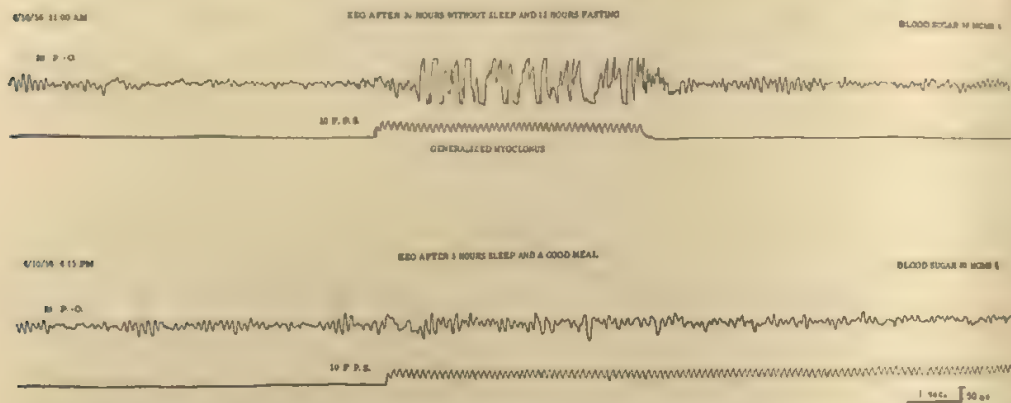


FIG. 5.—Samples of EEG recording from 22 year old student control with normal resting EEG. The first record was made at 11:00 a.m. following a night without sleep and after a 12 hour fast. The marked EEG activation shown was accompanied by generalized myoclonus. The second record was taken approximately 4 hours later after the subject had had a good meal and 3 hours sleep. At this time neither clinical nor EEG activation occurred.

lowing 3 hours of sleep and a good meal he no longer demonstrated clinical activation and showed but little EEG change to photic stimulation.) One might wonder whether such changes in metabolic conditions, not uncommon among schizophrenic patients, could account for some of the lower convulsive thresholds reported in the literature.

The ease with which an intermittent photic stimulus could induce paroxysmal activity in the brain of any subject after sensitization by a convulsant drug (i.e., hexazole) led to its use as a new type of shock treatment (photo-shock) (Gastaut and Cossa(5), O'Flannagan(17) and Ulett(25)). It seemed to us that such a method might permit an evaluation of subconvulsive treatments as compared to convulsive treatments(22), hence a matched control study was completed (29). The results of this study concerning the value of photo-subconvulsive treatment are in agreement with those of Montagu's(13) carefully controlled investigation of subconvulsive electroshock. Results by Montagu and our own controlled study indicate that subconvulsive treatments are without value in the therapy of either psychoneurotic (anxiety) or psychotic disorders (depression). Convulsive photo-shock on the other hand appeared to be more efficacious than routine electroconvulsive therapy. We found photo-shock to produce a gentler seizure of gradual onset, to create less confusion and to show,

in a 6-month follow-up, a more lasting recovery.

Another use of intermittent flashing light is as a tagged stimulus in the search for neurophysiological processes underlying learning and more particularly conditioning. Early work from Russia(10) and from our own laboratory seems to indicate that in the learning process there is a phase where the brain may beat in the rhythm of the conditioning stimulus (light) at a time when the light stimulus has been turned off. The evidence for this is at the moment tenuous but it is strengthened by the work of Morrell and Jasper(14) who found in monkeys, when photic stimulation was paired with a steady sound stimulus, that for a limited period of time the sound alone could induce the driving response. Much work remains to be done in this interesting area.

SUMMARY

Intermittent photic stimulation has been of value in psychiatric research in a number of areas which include: (1) the development of screening techniques based upon the EEG driving response and subjective responses to photic stimulation; (2) correlated studies of photic stimulation with psychological tests; (3) studies relating driving response to clinical symptomatology; (4) use in provoking paroxysmal or psychiatric symptoms;

(5) use of photic stimulation, together with a convulsant drug to study differences in convulsive thresholds among patients of various diagnostic groups; (6) as a treatment method in photo-shock, and (7) for studies of the neurophysiology of learning.

BIBLIOGRAPHY

1. Blum, R. H. *J. Ment. Sci.*, 102: 160, 1956.
2. Buchthal, F., and Lennox, M. *EEG Clin. Neurophysiol.*, 5: 545, 1953.
3. Ellingson, R. J. *Psychol. Bull.*, 53: 1, 1956.
4. Gastaut, H. *EEG Clin. Neurophysiol.*, 2: 263, 1950.
5. Gastaut, H., and Cossa, P. *La Semaine des Hôpitaux de Paris*, 1949.
6. Gleser, G., Haddock, J., Starr, P., and Ulett, G. *Psychiatric Screening of Flying Personnel. USAF School of Aviation Medicine, Project 27-0202-007, Report #10*, 1954.
7. Hill, D. *Fol. Psychiat. Neurochir. Neerld.*, Congresswummer, 3-19, 1948.
8. Johnson, L., and Stern, J. *J. Consult. Psychol.*, 19: 311, 1955.
9. Lieberman, D., Moenig, J., and Hacker, M. *EEG Clin. Neurophysiol.*, 6: 9, 1954.
10. Livanov, M., and Poliakov, K. *Bull. Acad. Sci.*, 3: 286, 1945.
11. Lovett Doust, J., and Schneider, R. *J. Ment. Sci.*, 98: 640, 1952.
12. Matarazzo, R., Watson, R. I., and Ulett, G. *J. Clin. Psychol.*, 8: 368, 1952.
13. Montagu, J., and Davies, L. *J. Ment. Sci.*, 101: 577, 1955.
14. Morrell, F., and Jasper, H. *EEG Clin. Neurophysiol.*, 7: 461, 1955.
15. Mundy-Castle, A. *EEG Clin. Neurophysiol.*, 2: 187, 1953.
16. Mundy-Castle, A. *EEG Clin. Neurophysiol.*, 3: 353, 1951.
17. O'Flannagan, P., et al. *J. Ment. Sci.*, 97: 174, 1951.
18. Sells, S. B. *Studies of EEG activation in Air Force cadets, correlation with test and field performance data. (Research in progress.)*
19. Shagass, C. *Amer. J. Psychiat.*, 112: 41, 1955.
20. Ulett, G. A. *Arch. Ophthalmol.*, 50: 685, 1953.
21. Ulett, G. A. *Psychosomat. Med.*, 15: 66, 1953.
22. Ulett, G. A. *Amer. J. Psychiat.*, 109: 741, 1953.
23. Ulett, G. A., and Gleser, G. *Science*, 115: 678, 1952.
24. Ulett, G., Brockman, J. C., Gleser, G. and Johnson, A. *EEG Clin. Neurophysiol.*, 7: 597, 1955.
25. Ulett, G. A., Gleser, G., Caldwell, B. M., and Smith, K. *Bull. Menninger Clin.*, 18: 138, 1954.
26. Ulett, G. A., Gleser, G., Lawler, A., and Winokur, G. *USAF School of Aviation Medicine, Project Report 21-37-002, Number 4, August 1952.*
27. Ulett, G. A., Gleser, G., Starr, P., Haddock, J., Lingley, L., and Lawler, A. *USAF School of Aviation Medicine, Report #5*, 1953.
28. Ulett, G. A., Gleser, G., Winokur, G., and Lawler, A. *EEG Clin. Neurophysiol.*, 5: 23, 1953.
29. Ulett, G. A., Smith, K., and Gleser, G. *Amer. J. Psychiat.*, 112: 795, 1956.
30. Walter, V. J., and Walter, W. G. *EEG Clin. Neurophysiol.*, 1: 57, 1949.

METHODS EMPLOYED AND RESULTS OBTAINED IN PSYCHIATRIC STUDIES WITH NEW DRUGS ACTING ON THE BRAIN STEM¹

F. A. MIELKE

The clinical investigations with pharmacological agents which we have been conducting at the Burghoelzli Clinic, Zurich, extend back over 2½ years. During this time, we have treated several hundred patients and studied their reactions from the therapeutic and scientific aspects. The following new drugs proved themselves clinically applicable: (1) Reserpine (Serpasil), (2) Chlorpromazine (Largactil), (3) Covatin (P-butylmercaptobenzhydryl-8-dimethylamino-ethyl sulphide) as hydrochloride (derived from the antihistamine Benadryl).

To begin with, some details should be given as to how we assessed the results obtained. Under the conditions prevailing in our clinic, it was found that the procedure yielding the most satisfying results was to entrust the testing of each different drug to the same doctor; he initiates the treatment himself, keeps the patients under surveillance, and discusses the details of his cases with other colleagues in the clinic, particularly those responsible for the various wards. This method has several obvious advantages:

1. It makes it easier to obtain an over-all picture of the patients undergoing treatment and to compare the various forms which the process of the disease takes in each individual case.

2. The psychological and somatic findings are recorded and followed up by one and the same doctor.

3. This same doctor studies the course of the disease from the very beginning to the catamnesis.

4. When the findings are assembled and the statistics analyzed, the doctor who has completed a series of investigations in this manner has a good and clear personal impression of every patient he has treated. This appreciably simplifies the task of assessing precisely how a psychosis has responded to a given drug—a task which is often far

from easy; it also ensures more reliable evaluation of the results.

5. In many cases treatment is an ordeal which has, as it were, to be shared with the patient—either because he is completely lacking in understanding at the start or because the side-effects of the drug, such as tremor, may begin to undermine his confidence in the therapy. Here, in the majority of cases, we were able to exploit the phenomenon of “transference” between patient and doctor.

6. Where treatment is conducted in this systematic fashion, the nursing staff has a better and more clear-cut conception of the character and purposes of the therapy. If a ward attendant requires instructions or an example to guide him, he knows to whom he can turn.

The problems which have chiefly interested us so far, and have, in one way or another determined the character of our studies, are the following:

1. To what extent and in what way do the new drugs improve the symptoms of psychotic, neurotic, and psychopathic patients or disorders of organic origin? (Disorders treated by us to date include schizophrenia, manic and depressive states, psychopathic reactions, acute and chronic organic syndrome associated with cerebral arteriosclerosis and alcoholism, mental deficiency and organic syndromes associated with epilepsy, senility and Huntington's chorea.)

2. What is the relationship between the therapeutic effect and the concomitant somatic symptoms produced by these drugs? Are the somatic and psychological effects interdependent or are the accompanying symptoms, especially those of a neurological nature, dysfunctions which must be accepted as the price to be paid for the benefits of the therapy?

3. Do these new agents produce a long-term change in the course of psychotic processes, especially those of schizophrenia? Are there any connections between the success or failure of the treatment and the pa-

¹ From the Burghoelzli Psychiatric Clinic, University of Zurich, Zurich, Switzerland, (Director: Prof. M. Bleuler).

tient's prepsychotic personality, his physique, and heredity? In other words: is the therapy symptomatic or causal?

It was with these same problems in mind that M. Bleuler⁽¹⁾ some 15 years ago, examined "the nature of schizophrenia remissions following shock therapy." His pioneer study served as a guide to our present investigations. Accordingly, in attempting to assess the long-term results of the treatment administered to our schizophrenic patients, we have also distinguished between the following categories, corresponding to the course of the diseases: (1) acute or chronic onset; (1) simple or cyclic course; (3) terminal stage reached prior to medicamentous therapy.

On this basis, we have drawn up the following groups: (1) Deterioration (Dementia²) following: (a) an acute course, (b) a chronic course, (c) a cyclic course; (2) residual states (Defective²) following: (a) an acute course, (b) a chronic course, (c) a cyclic course; (3) previous recoveries (good or complete remission): following a cyclic course; (4) atypical courses; (5) extremely acute schizophrenia; (6) leucotomised patients with subsequent relapse.

In no instance did we have any particular difficulty in fitting our cases into the above pattern. This classification according to course of disease offers several advantages when assessing the results of treatment:

1. It provides a guide to the prognosis and enables one to recognize quite clearly—irrespective of the symptoms displayed—which pathological process one is treating. In this way, it is at least to some extent possible for the strict standards of methodical drug-testing as practised in internal medicine, e.g., in connection with the treatment of hypertension (Martini), to be applied to the complex and equivocal field of schizophrenia.

2. When describing the results obtained, it serves as a clear means by which to survey and compare the cases treated. It also marks a step toward an international standardization of the conception of schizophrenia, which at present is still variously interpreted.

We very soon learned from experience that the indications for the different drugs could not be determined on the basis of the diag-

nosis or by reference to the system of schizophrenia classification that has just been outlined. Instead, it is the clinical picture of the psychosis and the principal symptoms which afford the main guide. Accordingly, we also adopted a scheme for differentiating between the various symptoms, about which, however, it is not proposed to say anything further here.

For the sake of convenience, we grade our therapeutic results in the following categories: (1) No appreciable psychic effect either during or after treatment. Temporary sedation at times, as a direct sequel to individual doses. (2) Marked decrease in schizophrenic symptoms. Patient much easier for the nursing staff to handle, and able to participate in the simplest forms of occupational therapy. (3) Satisfactory improvement on an inpatient basis. Patient co-operates well, displays some independent initiative, and can be kept in a quiet or open ward. (4) "Social remissions" and "residual states." Patient capable of earning a living in a simple routine occupation. Schizophrenic symptoms, though still present, are slight and such as to arouse little attention in the casual observer, but there is clear psychiatric evidence of defective personality. (5) Good remission. Patient fit for work. No recognizable psychotic symptoms, but a slight change in personality. (6) Complete remission. No change either in personality or performance.

Table 1 gives the general appearance of an assessment chart such as is drawn up for each patient.

And now for some details concerning the results we have so far obtained:

Covatin.—This has hitherto been described in the literature as a sedative with spasmolytic but no hypnotic properties. No toxic effects were observed with this drug in response to daily doses of 150 mg. for 150 days or 300 mg. for 50 days. Given alone, Covatin had no significant effect on our psychiatric patients. At present, we are using this drug only for initial treatment and always in combination with chlorpromazine. This combination does not seem to influence the patient's impulses, initiative, and psychomotor system, but does modify primarily his low spirits and melancholy. Hence, we have already achieved several encouraging successes with this com-

² Classification according to Manfred Bleuler.

atmosphere of calm, security, and understanding in the ward in question. Throughout the entire course of treatment, we study each patient's particular problems. Where the patient claims to hear voices, reports imaginary experiences, or suffers from delusions, we always begin by accepting these notions as reality; we discuss them with the patient, and promise to get to the bottom of his problem or protect him from imagined dangers. In this connection we also frequently make use of interpretation by "transference," as described by Rosen and Benedetti.

As the drug takes effect, the patients themselves begin to regard the doctor and the nursing staff as healers and helpers—as allies in their struggle against the psychotic forces. Hence, the words and explanations used by the doctors and staff tend to assume great importance as in counteracting the patient's psychotic ideas and impulses; the very fact that a patient can, if only to some extent, believe in what they say is a sign that he is beginning to gain insight. Thus, provided one understands how to make profitable use of their time, the patients need not be left to idle away their days in futile inactivity.

Direct analysis of an individual schizophrenic patient involves a considerable sacrifice of time and effort for the doctor, and for this reason it resorted to only in exceptional cases. Where reserpine treatment is given, however, it is possible to achieve an all-around psychotherapeutic effect.

After an average of 14-21 days, we allow the patients to get up, whereupon we gradually introduce them to occupational therapy while at the same time keeping a watchful eye on their mental health and treating them with Serpasil tablets.

In order to bridge over a certain phase occurring during convalescence, we often administer Ritalin or Dexedrine, preferably spansules, either after the reserpine course has been completed or while the patient is being adjusted to a maintenance dosage of reserpine. This combined treatment with Ritalin or Dexedrine is especially indicated in cases of depression; here very accurate dosage is called for, so as to prevent the patient from lapsing into increasing lethargy.

To revert to the questions mentioned earlier, which our studies were designed to

TABLE 2

RESULTS AFTER A SINGLE COURSE OF RESERPINE THERAPY—194 PATIENTS

	Immediately after Reserpine treatment	After one month	After six months
No appreciable reaction.	32	77	108
Marked decrease of symptomatology	31	19	10
Social improvement on an inpatient basis . .	74	27	23
Social remission	44	50	28
Good remission (significant improvement) .	11	12	17
Complete remission (cure)	2	8	7
Total	194	193 *	193 *

* One discharged patient died.

answer, the results obtained with Serpasil are presented in Table 2. The catamnesis of 98 of these patients presented after 12 months of therapy (in contrast to the results one month after treatment) appears in Table 3.

Deteriorated patients and those with unsuccessful leucotomies are not included in these statistics, since it is not possible to assess their cases merely on the basis of a single course of reserpine therapy. As a rule, it is only after they have undergone several long courses of treatment or long-term medication that patients respond with an improvement to categories 2 or 3. With this method of treatment, we succeeded in rescuing a number of hopelessly stranded cases among the chronic patients in the clinic. If conducted in a more intensive and persistent manner, these new courses of treatment may

TABLE 3

RESULTS WITH RESERPINE AFTER 12 MONTHS OF TREATMENT—98 PATIENTS

	One month after treatment	Twelve months after treatment
No appreciable reaction	37	69
Marked decrease of symptomatology	12	4
Social improvement on an inpatient basis	18	6
Social remission	23	9
Good remission (significant improvement)	4	4
Complete remission (cure) . .	4	4
Total	98	96 *

* Two discharged patients died.

well help schizophrenic patients on the road to a form of existence which, although obliging them to remain in a mental institution, is nevertheless better than that to which they might otherwise have been condemned.

As yet, we are not in a position to judge what effect prolonged maintenance doses, given perhaps for years at a time, will have on mildly defective schizophrenics. In cases in which a good "social" remission has been achieved, it is doubtful in most instances whether the patient will take the drug regularly, although a single daily dose should prove sufficient. On the other hand, we know of several cases already, in which relapse and, for example, exacerbations in paranoiac subjects have been successfully nipped in the bud with reserpine by the patient's own family doctor.

Bearing in mind the system we have adopted for classifying these mental disorders, according to the course taken by the disease, the problem of employing prolonged treatment with maintenance doses raises, among other points, the following specific questions: (1) In cases where the disease follows a cyclic course, and especially where acute episodes follow in rapid succession, is a drug which acts on the brain stem capable of prolonging the remissions or preventing relapse altogether? (2) Is it possible, by means of prolonged medication (and ambulatory psychotherapeutic treatment), to raise the patient out of a defective state, especially in cases where the disease assumes a cyclic course and a certain degree of deficiency remains?

This raises the whole question of the problems connected with long-term therapy and with the prevention of acute episodes in the course of the disease.

Further results obtained by us cannot be given here in detail, but may be presented in summary form:

1. In 84% of our cases, a single course of reserpine—given in a dosage corresponding to the severity of the symptoms—was effective in influencing the process of the disease *for the present*. The therapeutic result achieved in such instances could be classified as ranging between "satisfactory improvement on an inpatient basis" to "complete remission"—depending on the severity of the patient's psychotic condition.

2. The result of reserpine therapy depends upon the stage at which the treatment is initiated (dementia, defectiveness), upon whether the patient has hitherto recovered from cyclic episodes, and upon the severity of the individual symptoms.

3. The *immediate* success of a single reserpine treatment is independent of the prepsychotic personality. On the other hand, the patients who are still cured 1 year after the end of treatment showed a prepsychotic condition which was 49% healthier than the other patients. Relationship between success and failure of the therapy and physique or heredity has not been found.

4. The treatment has no long-term effect on the course of the various schizophrenic processes. In every case, the schizophrenic process one year after treatment runs the same course as before. The only exceptions to this rule are patients with a particularly favorable prognosis, *i.e.*, those suffering merely from a mild defect and, even then, only if the disease displays a cyclic pattern.

5. In cases involving acute schizophrenia and cyclic patterns, in which every acute episode has hitherto been followed by recovery, the over-all result achieved with reserpine corresponds to the response elicited with the types of symptomatic therapy previously in common use. From the biological aspect, the "cures" effected with these latter forms of treatment resemble spontaneous remissions.

6. The concomitant somatic effects, and particularly the extrapyramidal symptoms, are not essential prerequisites for the drug's psychological action, nor is there any causal connection between such somatic effects and its psychic action. It would be more correct to consider them as regulatory disturbances, which occur regardless of either the size of the dosage administered or the initial state of the patient's autonomic nervous system and brain stem.

To sum up, then, we would describe reserpine as a very effective drug for the *symptomatic treatment* of psychiatric cases. In comparison with previous forms of therapy, it has several advantages, among which in particular is the fact that it involves no risks when given in appropriate doses, and that it is relatively easy to handle; one of its principal merits, moreover, is that it offers every

possibility and encouragement for psychotherapy and occupational therapy.

Chlorpromazine.—This drug bears a very close resemblance to reserpine as regards its psychic effects. In contrast to reserpine, it occasionally has a mild euphoric effect on depressed patients. This would appear to be an advantage when treating some cases of depression. The significance of chlorpromazine is generally recognized today and reports on clinic experiences amount to more than a thousand articles at present. If I have reported mostly on our experiences with reserpine, it was done with the intention of discussing the principles of clinical methodology in connection with drug therapies. Therefore, what was said about reserpine, applies generally to chlorpromazine in the same fashion. K. Ernst (4), a member of our staff, reported in 1953 about the effects of chlorpromazine after trying it out on himself. Since then, several hundred patients have been treated with this drug.

There are certain patients who respond admirably and unfailingly only to the one or the other of these 2 drugs, even when the treatment is given repeatedly. In some cases, this is obviously due to differences in the patients' physical reaction, whereas in other cases it is impossible to discover the reason. We have hitherto assumed that such differences in the effect of these drugs are determined by the state of the patient's autonomic nervous system at the outset of treatment. To investigate this problem is a task of practical significance for the future. The chief differences between reserpine and chlorpromazine lie in their somatic effects. It may even be said that the difference in their somatic effects corresponds to the chemical difference in their structural formulas, whereas, curiously enough, their psychic effects are almost identical—assuming, of course, that they are given in equivalent dosages. For our patients, we found that about 10 mg. reserpine were equivalent to 300-400 mg. chlorpromazine. The question as to which of the 2 drugs should be used must be decided mainly in the light of the patient's physical case history and physical condition, as well as his individual reaction.

The progress which these new drugs acting on the brain stem have wrought in the

treatment of psychiatric cases is obvious. They represent the fulfillment of a desire that has been felt for many years—the desire for adequately effective drugs with a damping effect on the autonomic nervous system. Their introduction not only constitutes a welcome addition to the forms of treatment hitherto available for use in mental institutions, but also provides a powerful stimulus for those whose mission it is to tend the sick in mind. At the same time, the appearance of these new drugs has revived interest in many aspects of the problem of mental disease.

SUMMARY

The method and results of treatment with reserpine, chlorpromazine, and Covatin are reported. Also emphasized are the expediency of a semidarkened ward and the patient's accessibility to early psychotherapeutic contact. With chronic cases, the knowledge of the spontaneous course of the disease is the foundation of our appraisals of the therapeutic results. Categorization of patients is discussed according to the course of their illnesses before treatment. Results of therapy are further broken down into 6 degrees of improvement. Cases of schizophrenia treated by reserpine are used as an example for the manner in which pharmacological treatment affects only the temporary disease process. Follow-up studies of 194 patients mainly show that the treatment has no long-term effect on the course of the various schizophrenic processes. In every case, the schizophrenic process 1 year after treatment runs the same course as before.

BIBLIOGRAPHY

1. Bleuler, M. Arch. f. Psychiatr. u. Ztschr. Neurol., 173: 553, 1941.
2. ———. Schweiz. med. Wschr., 85: 443, 1955.
3. ———, u. W. A. Stoll. Ann. New York Acad. Sci., 61: 167, 1955.
4. Ernst, K. Arch. f. Psychiatr. u. Ztschr. Neurol., 192: 573, 1954.
5. Mielke, F. A. Schweiz. med. Wschr., 85: 441, 1955.
6. ———. Arch. f. Psychiatr. u. Ztschr. Neurol., 193: 263, 1956.
7. ———. Schweiz. med. Wschr., 86: 162, 1956.
8. Weber, E. Schweiz. med. Wschr., 84: 968, 1954.

TRANSORBITAL LEUCOTOMY IN NONINSTITUTIONAL CASES

ABRAHAM GARDNER, M. D.¹

INTRODUCTION

Transorbital leucotomy was developed in the course of search for refinement of the standard or prefrontal lobotomy. Walter Freeman elaborated the technique in its present form, basing his procedure on work by Fiamberti (1).

I have been using this method of psychosurgery since 1949. The patients in the various series reported in other papers, mostly by Freeman, were a mixture of institutional and noninstitutional cases. Those in this report came almost entirely from private practice and there are, therefore, certain interesting observations to be noted.

Of the various types of psychosurgical procedures none has proven to be simpler or safer than transorbital leucotomy. It has been pointed out before (1, 2, 3), and this author agrees, that the psychiatrist who makes an adequate study of the surgical anatomy and the technique of this operation can readily qualify for its use. This is because of its comparative safety and the inherent simplicity of the technique. In our series the operative mortality rate to date is 1.2%.

TECHNIQUE

The operative technique is as follows: One hour before operation the patient is given morphine sulphate gr. 1/6 and atropine sulphate 1/100 subcutaneously. The anesthetic agent is Sodium Pentothal given intravenously.

The instruments are the transorbital leucotomes especially designed by Freeman. The point of the leucotome is inserted beneath the raised upper eyelid at a distance of 3 centimeters from the midline, in a plane parallel with the bony ridge of the nose. It is caused to penetrate the superior conjunctival fornix and rested against the high point of the orbital roof. It is then tapped gently in to a depth of 5 centimeters and the handle is drawn laterally to the outer rim of the

orbit. The leucotome is then returned to the starting position and tapped in another 2 centimeters to a total depth of 7 centimeters. The handle is then drawn mesially to the ala of the nose, thence back to the starting position and then upward against the superior rim of the orbit. Here sufficient pressure is exerted to cause cracking of the edges of the bone at the point of penetration through the orbital roof. This allows for severance of some of the nerve fibers which overlie the orbital roof. The instrument is then withdrawn and a pressure bandage is applied and left in place for 20 to 30 minutes. This technique is carried out bilaterally.

The routine postoperative orders are as follows: (1) Blood pressure and pulse are taken every hour until the patient is fully awake. (2) Crysticillin, 300,000 units, is given intramuscularly stat. (3) Sulfadiazine, gm. 1.0, by mouth, every 4 hours for 24 hours. (4) Aspirin, grains 5, by mouth, every 4 hours if needed for headache or pain. (5) Ice-cold compresses are applied to the eyes continuously through the first 24 hours after surgery. (6) Warm boric solution compresses to the eyes continuously throughout the second 24 hours. (7) Report any unusual trend in blood pressure, pulse, temperature or state of consciousness. (8) Report immediately any convulsions and be prepared to administer sodium luminal, grains 5, intramuscularly. (9) Fluids and diet as tolerated. (10) Patient to remain in bed during the first 24 hours and then is allowed up and about, *ad lib*.

The patients usually were discharged home 2 days after operation.

Thus it appears quite clear that this procedure, in the hands of psychiatrists trained in its use, becomes more readily accessible for the patients in whom it is indicated. Also of much importance is the fact that is to be done by the doctors who take the responsibility of recommending it.

All the cases in this series were operated in a small community general hospital and no difficulty in their management was encountered. This, plus above-described technique

¹ Address: 190 Ocean St., Lynn, Mass.

and aftercare, emphasizes quite strongly that the procedure is suitable for use in the general hospital.

There remains the question of evidence that this operation is worth while doing. This, it is hoped, is shown in the evaluation of the data herein presented.

CASE MATERIAL

The patients chosen for the operation were those whose illnesses were chronic, severe and disabling. All had failed to respond adequately to various forms of more conservative therapy.

Emphasis in the selection of patients was placed on the prominence of tension, fear, agitation and depression; *i.e.*, the "tortured self-concern" in their symptomatology. In the schizophrenic patients special attention was given to the intensity of emotional tone still remaining. The group of psychoneuroses was made up of patients whose illness was of very long duration and who had true disability or incapacity.

The 115 cases herein summarized have been followed for 1 to 6 years with an average of $3\frac{1}{2}$ years. The only criterion of selection for evaluation was adequate follow-up.

The average mortality as reported in other series is 1.7% to 1.8%. In our entire series to date the rate is 1.2%. There were no complications of major significance and, of the few minor complications, none persisted longer than 4 days postoperatively. These consisted, in 2 patients, of inertia, lasting 2 days in one and 4 days in the other. Another patient developed an acute hallucinatory reaction with confusion a few hours after operation and this persisted 3 days before clearing. There were no personality changes, "vegetable reactions," loss of skills or inhibitions, or impairment of intellectual level, so far as could be observed. There were no postoperative epilepsies and no patients showed memory loss.

Results were evaluated on the basis of easing of symptoms, economic, social and recreational readjustment. Those with full remission of symptoms and good adjustments otherwise were classed as "remissions." Those with good adjustments but who had mild residual symptoms were classed as "improved," and the remaining cases as "failed."

The schizophrenic group totaled 40 cases: 9 schizo-affective, 12 paranoid, 13 catatonic, 1 hebephrenic, 1 juvenile and 4 type undetermined. The average duration of illness for the whole group was 6 years and the average follow-up after operation 4 years. There were 15 "remission," 12 "improved," and 13 considered as "failed."

In the group of affective disorders were 11 patients: 4 manics of whom 3 were "remissions" and 1 "failed," 1 hypomanic who attained a "remission," and 6 involution reactions of whom 4 were "remissions" and 2 "improved." The average duration of illness in this group was 9 years and the average follow-up 3 years.

In the group of psychoneuroses there were 51 patients. The average duration of illness was 15 years and the average follow-up 3 years. There were 34 cases of psychoneurosis, mixed types, of whom 15 were "remissions," 17 "improved," and 2 "failed." Of the 14 chronic anxiety reactions 8 were "remissions," 5 "improved," and 1 "failed." There were also 2 obsessive compulsive reactions, one a "remission" and one "improved." There was one case of neurasthenia which resulted in a "remission."

In a group of miscellaneous disorders there were 5 patients who were operated for intractable pain and suffering syndromes, 1 senile paranoid reaction, 2 senile depressions, 3 paranoid states, 1 psychosis with epilepsy, and 1 psychosis with mental deficiency. Of this group 5 attained "remission," 3 "improved," and 5 "failed." Four of the 5 who had intractable pain and suffering obtained excellent results. The 2 patients, one psychosis with epilepsy and one psychosis with mental deficiency, improved as to their psychoses, and that was the aim of the operation. The 3 with senile reactions did not improve. Table 1 gives a summary of all cases.

TABLE 1

SUMMARY OF ALL CASES

Diagnosis	No. of cases	Remissions	Improved	Failed
Schizophrenics	40	38%	30%	32%
Affective disorders.	11	73	18	9
Psychoneuroses	51	49	45	6
Miscellaneous	13	38	24	38
Totals	115	44%	36%	20%

DISCUSSION

In general, the schizophrenics fulfilled the usual criteria of chronicity and disability as regards selection of cases for surgery. They did not show the characteristics of being "institutionalized," and in this regard were therefore less severe and regressed than similar groups in other series. Our results in this group are comparable to those reported by others (1, 2, 3, 6, 8, 10, 11).

Our most impressive results were found in the group of psychoneuroses. This is the largest group in the series and for the most part the illnesses were of the longest duration. In most instances their reactions to surgery were quite dramatic. It was common to observe marked alleviation or total disappearance of symptoms within one to two hours after operation, or about the time needed to waken fully from the medication and anesthesia. The great majority of those who responded well to the procedure showed their improvement in the first 24 hours. The usual hospital stay was two days after surgery. Within one to two weeks these patients were able to return to their regular activities of work and social and recreational pursuits. Some waited for the peri-orbital swelling and ecchymosis to clear enough so that they would not attract too much attention. Others simply wore dark glasses to mask the "black eyes" and some were back at their regular pursuits as early as 4 days after operation. This was true of all groups, not just the psychoneuroses.

The psychoneurotic patients had been struggling for years without much success to maintain a reasonable adjustment. They had eventually become truly disabled and had failed to respond adequately to other therapies. They were often receiving nothing more than symptomatic medication and had come to feel they were burdens to themselves and others. Such cases are encountered quite commonly and are often distressing to the physician as well. It is our opinion that such patients, after careful screening, should be considered for transorbital leucotomy. The risk is small, the response is frequently immediate and dramatic and the results are excellent in a very satisfactory percentage of cases. It is interesting to note that these patients, when exposed to strong stresses subsequent to operation, responded in an average manner. This would suggest that

the surgery had served to relieve them sufficiently of their tensions, fears, etc., but without producing indifference or inability to react emotionally.

In a period of over two years of extensive experience with tranquilizing and ataractic drugs, I have seen no convincing evidence that these drugs have made psychosurgery obsolete. They are valuable in treatment of psychiatric problems and should be given full trial before resorting to surgery but it should be recognized that they are not yet proven specifics, curatives, or productive of "medical lobotomies."

SUMMARY AND CONCLUSIONS

Results in 115 cases of transorbital leucotomy of noninstitutional patients are reported. The author believes that this is an excellent technique for treatment of selected cases from private practice, as well as such institutional cases reported by others.

Studies of the psychoneurotic group are of particular interest and indicate another method of management of a very common and difficult problem.

Results in those patients operated for relief of intractable pain and suffering suggest that this procedure is effective and among the least drastic of surgical measures.

Several patients who had secondary dependency on narcotics, barbiturates, and alcoholic beverages obtained relief from these dependencies along with relief from the underlying disorders and none showed any withdrawal symptoms.

BIBLIOGRAPHY

1. Freeman, W. *Lancet*, 2: 371, 1948.
2. Freeman, W. *Ann. Dist. Columbia*, 5: 17, 1948.
3. Jones, C. H., and Shanklin, J. G. *Northwest Med.*, 47: 421, 1948.
4. Hoch, P. *Am. J. Psychiat.*, 106: 448, 1949.
5. Freeman, W. *Am. J. Psychiat.*, 106: 534, 1950.
6. Jones, C. H., and Shanklin, J. G. *Am. J. Psychiat.*, 107: 120, 1950.
7. Freeman, W., and Watts, J. *Psychosurgery*. Springfield, Ill.: Charles C Thomas, 1950.
8. Freeman, W., et al. *J.A.M.A.*, 156: 939, 1954.
9. Moore, M., and Winkelman, J. *Am. J. Psychiat.*, 107: 801, 1951.
10. Moore, H., and Lutz, W. *J.A.M.A.*, 146: 324, 1951.
11. Wilson, W. W., Pittman, A. R., Bennett, R. E., and Garber, R. S. *Am. J. Psychiat.*, 108: 444, 1951.

CLINICAL EVALUATION OF PACATAL¹

PAUL E. FELDMAN, M. D.²

The necessary search for newer and perhaps more effective ataractics has resulted in an interest in the therapeutic potentialities of N-Methyl-Piperdyl-(3)-Methyl-Phenothiazine; also known as "Mepazine" or "Pacatal."¹ This drug, under the trade name of "Lacumin," has been tested upon the European continent by Werenberg(1), by Laborit and Huguenard(2) and Kleinsorge(3). In the United States and Canada, Rudy *et al.*(4), Bowes(5) and Kline and Jacob(6) have reported upon their experiences with this drug.

Animal pre-testing of Pacatal indicates that it has a relatively low acute-animal-toxicity and causes no hematological deviations from normal at any dosage level. Studies(7) indicate that the administration of dosages of 100 mg./kg. to dogs results in lymphocytic infiltration of the liver and active degeneration of spermatic cells.

The fate of Pacatal in the body is unclear. Hendriksen *et al.* (8), found that rats deposit Pacatal in various tissues and that a relatively small amount is eliminated. They, however, did not find evidence of cumulative effects.

Pharmacological studies(7) with Pacatal indicate inhibition and stabilization of the central and peripheral regulatory mechanism of the autonomic nervous system and direct depression of the central nervous system, manifested clinically by sedation (without hypnosis), and, potentiation of narcotics, hypnotics and analgesics.

METHOD

CLINICAL MATERIAL

This report summarizes the experiences of the Topeka State Hospital Medical Staff with 130 patients who received this drug. These patients were chronically psychotic and refractory to all previous forms of therapy. Of this patient-group, 12 have been excluded from all aspects of the evaluation

¹ Pacatal provided through the courtesy of Warner-Chilcott Laboratories.

² Director of Research and Education, Topeka State Hospital, Topeka, Kansas.

TABLE 1

COMPOSITION OF TEST GROUP UPON THE BASIS OF DIAGNOSTIC CATEGORIES

	No. of Patients	Percent of total group
Schizophrenic reactions	86	72.9
Chronic brain syndromes.....	16	13.5
Psychoneurotic reactions	8	6.8
Manic-depressive reactions ...	4	3.4
Mental deficiency	4	3.4

other than those pertaining to toxic effects, because their medication had not been continued for at least 2 months. The remainder of the group received Pacatal for from 3 to 6 months. Table 1 summarizes the composition of this test group upon the basis of diagnostic categories. The severe chronicity-of-illness of the patients tested is reflected in the statistics of Table 2. It is pertinent to note that not a single patient tested had been mentally ill for *less* than 2 years, and, the great majority had been ill for more than 10 years.

CRITERIA

The method of evaluating response to Pacatal, with the criteria upon which this evaluation is based, is covered in detail in a previous report(9). It consists of the clinical rating of various aspects of behavior upon a 4-point scale, and the conversion of these individual ratings into an over-all rating (for total response to drug) using a 6-point scale.

ADMINISTRATION

Pacatal was provided in 25 mg. and 50 mg. tablets for oral administration, and, 2 cc. ampules (containing 25 mg./cc.) for intramuscular use. Actual dosages administered varied from 75 mg./day to 900 mg./day, with the majority of the patients receiving

TABLE 2

RELATIVE CHRONICITY-OF-ILLNESS OF TEST GROUP

Duration of illness (years)	Percent of total group
0-2	0
2-5	15.5
5-10	10.4
10 +	74.1

150-300 mg./day. Most of the patients were started with a dosage of 100 mg./day which was then gradually increased, depending upon patient response or the appearance of toxic symptoms. Table 3 indicates the relative proportion of patients on various dosage levels, each of the dosage levels having been found to be optimal for the patient concerned.

PRECAUTIONS

At the time this study was initiated, there was comparatively little literature available concerning the toxic effects of Pacatal. One report(10) stressed dryness of the mouth, blurring of vision, and, constipation. Kline (6) observed elevation of temperature, drowsiness and urinary retention, and, Bowes (11) encountered visual disturbances, anorexia, constipation and dizziness.

A standard type of precautionary regime for testing of an ataractic drug was instituted, with monthly examinations of blood and liver function, periodic but routine recording of blood pressure and the usual fractionation of dosages of analgesics, sedatives, etc. The known, reported side-effects were listed and the clinicians doing the actual testing were requested to note these and any other effects that appeared, and to correlate the appearance of a side-effect with the duration of medication and dosage. They were also requested to provide information as to the efficacy of any antidotes that were used symptomatically.

RESULTS

IMPROVEMENT

Table 4 indicates the effectiveness of Pacatal upon the various evaluative criteria of be-

havior. The criteria are listed in sequence of diminishing efficacy of drug.

Table 5 indicates the over-all effectiveness of Pacatal upon the various diagnostic categories.

SIDE-EFFECTS

Table 6 lists the side-effects encountered in the order of diminishing incidence. The fluctuating leucocyte counts observed by Bowes(5) and Werenberg(1) were not encountered in this series of patients.

DISCUSSION

At first glance, the results may not appear to be as good as those obtained with previously tested ataractics(12). A markedly improved rate of 11.9% in the schizophrenic group would hardly warrant Bowes' referral to Pacatal as a "promising new ataractic." However, when the severe chronicity of the schizophrenic patients tested is taken into consideration, the combined moderately and markedly improved rate of 42.9% does warrant some optimism as to the potentialities of this drug.

An additional asset of the drug, which was not measurable in the study, is the pleasant subjective feeling produced by Pacatal. It was described by some patients as "it makes me feel better," or "I feel less miserable," or "I feel out of this world" or "I feel less nervous." Some patients developed such a strong sense of well-being that they were reluctant to communicate their discomfort resulting from some of the side-effects for fear that the drug would be withdrawn. Many patients, despite blurred vision or excessive dryness of the mouth were eager to continue medication. Bowes(5) observed similar effects and reports a patient who had been changed from chlorpromazine to Pacatal saying, it was "like champagne after beer."

The drug appears to exert maximal therapeutic effects at dosages between 150-300 mg./day. Very few patients showed additional improvement (Table 3) when the dosage was increased above these limits, and the drug appears to be without effect in dosages of less than 75 mg. day. Hiob and Hipkins(14) found the most efficacious dosage level to be 300 mg./day though they frequently went as high as 600 mg./day.

TABLE 3

RELATIVE PROPORTION OF PATIENTS ON
VARIOUS DOSAGES

Daily dosage	Percent of total group
75	1.7
100	8.6
150	22.4
200	5.2
250	5.2
300	34.6
400	8.6
500	3.4
600	5.2
800	3.4
900	1.7

TABLE 4

THERAPEUTIC EFFICACY OF PACATAL ON THE EVALUATIVE CRITERIA

Category	No. of patients	No improvement	Slight improvement	Moderate improvement	Marked improvement
Appetite	38	63.2%	5.3%	13.2%	18.3%
Sleep	36	52.8	14.0	16.6	16.6
Tension	71	31.0	33.8	21.1	14.1
Combative ness	54	25.9	40.7	20.4	13.0
Accessibility	84	28.6	40.5	17.9	13.0
Sociability	70	52.1	22.9	12.9	13.1
Hyperactivity	63	30.1	38.1	19.0	12.8
Participation in adjunctive therapy	64	43.4	31.6	12.5	12.5
Hostility	73	24.7	41.1	26.0	8.2
Amiability	73	32.9	45.2	13.7	8.2
Appropriateness of conversation	66	39.4	33.3	19.7	7.6
Hallucinations	31	51.6	25.8	16.1	6.5
Negativism	75	26.6	46.6	21.3	5.5
Self-mutilation	19	84.1	0.0	10.6	5.3
Realistic planning	38	52.6	31.6	10.5	5.3
Dress	75	52.0	29.3	14.7	4.0
Bizarre mannerisms	51	64.7	23.5	7.8	4.0
Affect	52	50.0	38.5	11.5	0.0
Orientation	52	78.8	13.5	7.7	0.0
Judgment	41	73.2	19.5	7.3	0.0
Compulsiveness	32	78.1	15.6	6.3	0.0
Memory	32	87.4	6.3	6.3	0.0
Delusions	46	63.1	32.6	4.3	0.0
Insight	40	82.5	12.5	5.0	0.0

TABLE 5

RELATIVE EFFICACY OF PACATAL ON VARIOUS DIAGNOSTIC CATEGORIES

	No. of patients	No improvement	Slight improvement	Moderate improvement	Marked improvement
Schizophrenic reactions	86	11.9%	54.8%	31.0%	11.9%
Chronic brain syndromes *	16	25.0	50.0	—	25.0
Psychoneuroses *	8	—	100.0	—	—
Manic-depressive reactions * ..	4	—	100.0	—	—
Mental deficiency *	4	50.0	50.0	—	—

* Number of patients too small to be statistically significant.

TABLE 6

INCIDENCE OF SIDE-EFFECTS

Side effect	No. of patients	Percent of total group
Dizziness	39	30.0
Drowsiness	33	25.4
Blurring of vision	16	12.3
G.I. symptoms	12	9.2
Hypotension	10	7.7
Slurring of speech	8	6.2
Dryness of mouth	7	5.4
Turbulence	4	3.1
Allergy	2	1.5
Jaundice	2	1.5
Parkinsonism	1	0.8
Depression	1	0.8

The numbers of patients in the categories of Chronic Brain Syndromes, Psychoneurotic Reactions, Manic-depressive Reactions and Mental Deficiency were insufficient to

warrant any conclusions as to the therapeutic efficacy of Pacatal upon these syndromes.

As seen in Table 4, Pacatal follows a pattern similar to that of other ataractic drugs in its influence upon various aspects of behavior (12). Appetite, sleep, tension, combativeness, accessibility and hyperactivity show the best responses, whereas insight, affect, judgment, etc., respond disappointingly—as they do with other ataractics as well.

The most common side-effect noted was dizziness. This usually appeared shortly after medication was instituted and gradually subsided within two weeks. It was rarely incapacitating. The second most common side-effect was drowsiness which followed a self-limiting pattern similar to that observed with dizziness. The drowsiness in

some cases was severe, and a few patients were withdrawn from the study because of it. Drowsiness that did not subside spontaneously within two weeks responded well to moderate doses of cerebral stimulant (5-10 mg. of Dexedrine).

Blurring of vision was a distressing complication in 16 patients. It was severe and prevented these patients from reading or participating in handicraft therapy. Apter and Rinsley (13) found that the visual disturbance was due to a combination of paralysis of ocular accommodation and a drying of the corneal epithelium because of diminution of tear production. Complete symptomatic relief was obtained by the oral administration of neostigmine, in dosages well below those levels which might produce toxic symptoms—usually 7.5-15 mg. once, twice, or three times per day. Those patients who found it necessary or desirable to do close eye work or to read fine print were further benefited by the instillation of one drop of 0.1% Eserine in each eye, once per day.

Dryness of the mouth was reported in but 7 patients. This side-effect responded well to the regime instituted for blurred vision. Gastro-intestinal symptoms were nausea, vomiting, diarrhea or constipation. Slurring of speech was noted in 8 patients. All responded well to lowering of the daily dosage of Pacatal.

Hypotension was occasionally encountered, but was never of serious magnitude. The fall in blood pressure was gradual, not exceeding 30 mm. of mercury and no cases of orthostatic hypotension were noted. Two patients developed jaundice within 6 days of the time that Pacatal was started and their medication was promptly discontinued. These patients were receiving 25 mg. of Pacatal q.i.d. and the jaundice appeared to be the usual type of obstructive hepatitis seen during ataractic medication, differing only in that the period of jaundice persisted at maximum intensity for 6 weeks before the icterus began to subside. These two patients did not appear ill and were comfortable throughout the course of the hepatitis. They have both completely recovered and now display normal liver function.

One patient developed severe depressive symptoms culminating in a suicidal gesture on the 16th day of medication. She was re-

ceiving 75 mg. of Pacatal per day. Her daily dosage was increased to 150 mg./day and the depression subsided.

SUMMARY AND CONCLUSIONS

1. Pacatal is capable of eliciting therapeutic responses in chronically psychotic patients.

2. It is most efficacious for those aspects of behavior which are related to increased anxiety and least efficacious for judgment, insight, orientation, memory and affect.

3. The clinically significant side-effects are those related to the atropine-like action of Pacatal. Untreated eye complications, following prolonged administration of Pacatal, may lead to ulceration of the corneal epithelium.

4. It is recommended that any prolonged ocular disturbance as a result of Pacatal medication be treated with Neostigmine.

5. All the side-effects produced by Pacatal can be obliterated by symptomatic medication, lowering of daily dosage or discontinuation of the medication.

6. The results obtained with Pacatal are encouraging and warrant further investigation upon a prognostically better group of psychotic patients.

BIBLIOGRAPHY

1. Werenberg, H. *Nord. Med.*, **54**: 787, 1955.
2. Laborit and Huguenard. *Presse med.* **60**, Nr. 68, 5, 355, 1952.
3. Kleinsorge, H. *Med. Mschr.*, **11**: 760, 1953.
4. Rudy, L. H., Himwich, H. E., and Tasher, D. C. *Am. J. Psychiat.* (in press).
5. Bowes, H. A. *Am. J. Psychiat.*, **113**: 530, Dec. 1956.
6. Kline, N. S., and Jacob, G. M. *Am. J. Psychiat.*, **112**: 63, July 1955.
7. Warner Chilcott Laboratories. Introductory summary of pacatal pharmacology.
8. Hendriksen, U., Huus, I., and Kopf, R. Presented before Med. Soc. Kiel, Jan. 26, 1956.
9. Feldman, P. E. *Internat. Record Med.*, Fall 1956 (in press).
10. Warner Chilcott Laboratories. Pacatal.
11. Bowes, H. A. Personal communication to Warner Chilcott Laboratories, Nov. 4, 1955.
12. Feldman, P. E. *Am. J. Psychiat.*, **113**: 589, Jan. 1957.
13. Apter, J., and Rinsley, D. B. *J. Clin. & Exp. Psychopath.* (in press).
14. Hiob, J., and Hippins, H. *Med. Klinik*, **41**: 1746, 1955.

THE DEFECTIVE DELINQUENT¹

PETER W. BOWMAN, M. D.²

A discussion of the so-called "defective delinquent" should be opened with the statement that the symptom of mental retardation can be defined as an entity of considerable complexity which invades the intellect, the emotions, and physiology of the human personality. At the same time it is proper to acknowledge that our concept of the defective delinquent has yet to benefit from the new, comprehensive approach based on insights, programs, and concisely defined and commonly accepted medical, educational, psychological, and social procedures.

I cannot hope to offer a detailed study of what constitutes defective delinquency. I can elaborate on our obvious inadequacies and suggest that we replace emotionally charged administrative discussions of how to dispose of those labelled "defective delinquents" with a scientific analysis aiming at a definition of the problem as the only objective and acceptable basis for communication, legal provisions, treatment facilities, and a preventive program if possible.

As I have pointed out previously⁽¹⁾ we do not have a commonly acceptable definition of the term "delinquency." Often it is applied to misdemeanors and minor offenses committed by children or adolescents. Sometimes major crimes like robbery, manslaughter, first- and second-degree murder, have been termed "delinquency."

To the lawyer, delinquency has primarily legal implications. The teacher might refer to delinquency when he faces behavior disturbances which he cannot handle with the generally accepted and available disciplinary methods. To the psychiatrist the term "delinquent" is highly unsatisfactory since it suggests merely the violation of a social law without any reference to the motivation, circumstances, or medical and psychological diagnoses.

In the literature, we find that relatively little attention has been given the defective

delinquent. Some authors have studied the history of defective delinquency. Others have reported the legal problems involved, such as propriety of commitment or detention, draft of laws to dispose of defective delinquents in reformatories, penitentiaries, reform schools, or special prisons. Administrators have elaborated on the assumption that our state training schools are to be residential schools which cannot and will not tolerate behavior disorders, or, by implication, neuropsychiatric disorders⁽²⁾.

Many papers reflect an underlying anxiety about and intense rejection of the defective delinquent, primarily because of our obvious failure to integrate defective delinquency in either penology or psychiatry.

Sometimes the activities of the so-called "incurable mentally retarded" persons confront administrators and personnel of our generally understaffed and inadequately equipped state training schools and hospitals with problems of considerable proportions and consequences to the institutional operations, or to public school systems and other community agencies.

It is a known fact that courts have used a defective delinquent law or a juvenile defective delinquent act to handle defendants who were mentally retarded, on the following charges: Assault, felonious assault, theft of currency, larceny, wanton and lascivious behavior, theft, property damage, arson, common runaway, breaking and entering, larceny, theft of bicycle, false fire alarm, indecent exposure, exposure of naked body, theft of an automobile without the owner's consent, breaking and entering with intent to steal, lewd and lascivious behavior, injuring of a gravestone, throwing stones at a filling station, fornication, cruel treatment of animals, tampering with an automobile, throwing rocks large and capable of causing injuries, throwing a book at an individual, said book being large and capable of causing grievous injuries, for the best interests of the child and the protection of the community (patient's age 8½ years), manslaughter, rape, sodomy, infraction of institutional rules and regulations, etc.

¹ Presented at the North Eastern Regional Meeting, American Association on Mental Deficiency, October 1956, Southbury, Conn.

² Mental hospital administrator and superintendent, Pownal State School, Pownal, Me.

If commitment to an institution under these provisions is automatically for an indefinite period or for life, we must ask ourselves whether a delinquent, mentally retarded person is criminally responsible.

As Board (3) has pointed out, administration of a criminal law implies several value judgments:

1. Society is entitled to protection from further malfeasance by the criminal. A subsidiary value judgment is that a degree of punishment or isolation can be imposed on the criminal as a method of securing this protection.

2. Society is entitled to protection from potential criminals, from first offenders as well as repeaters. A subsidiary value judgment is that apprehended criminals can be punished by society to create deterrent examples before the law as a warning to potential criminals.

3. Society is best served by humane administration of the law consistent with the humane purpose of the law.

These value judgments he condenses into 3 aims in administering criminal law: 1. Preventing further malfeasance by the criminal; 2. deterring others from committing criminal acts; 3. humaneness towards criminals.

When we apply these 3 principles to the alleged defective delinquent we are immediately confronted with a number of questions.

What constitutes defective delinquency? Does it include a mentally retarded person who committed a criminal act or simply a misdemeanor, who displayed acting-out commonly seen in growing children? Does a mentally retarded person become a defective delinquent because of repeated infractions of institutional rules? Can an 8½ year-old mentally retarded boy be classified as a defective delinquent because of an alleged need to "protect him and the community" without even a charge, let alone a conviction? Is it possible to state that a mentally retarded child is considered a potential criminal though he has never committed a crime?

Who has the justifiable authority to pronounce the existence of defective delinquency? Is it to be an exasperated parent who for any number of reasons has failed to train and integrate his mentally retarded child in the family or in the community? Is it to be the prejudiced institutional superintendent who is forced to operate with an inadequate staff in excessively overcrowded

quarters which lack modern diagnostic treatment and educational facilities? Is it to be the public school principal who is forced to place mentally retarded children in grades far beyond their intellectual ability merely because of chronological age and physical growth?

A clarification of these and other questions will possibly lead to a consideration of the deterring values and the humaneness of marking mentally retarded persons as "defective delinquents."

Before presenting some previously reported case histories (1), I call attention to the fact that encephalitis, meningitis, the epilepsies, and other medical, psychiatric and metabolic organic disturbances can contribute to and occasionally cause violent and aggressive behavior.

Persons so afflicted, if intellectually competent, usually are placed in mental hospitals. If their intelligence falls within the range of mental retardation, functionally or potentially, I cannot see how we can escape our responsibility to accept them and to deal with them constructively in our institutions for the mentally retarded. They require psychiatric treatment and should be handled by psychiatrically trained nurses and attendants, not by correctional officers in a penal institution.

The following case histories are typical of patients who have been committed as defective delinquents (1):

1. This 13-year-old boy was committed to an institution for the mentally retarded in 1944 on a charge of property damage and assault. Patient was born at full term, acquired first teeth at 7 months, had whooping cough and measles at 6 months. He also had chickenpox and mumps at a later age. He began school at 7, attended a school for the deaf from September 1936 until 1944. While there he was considered unable to make satisfactory progress as he was "troublesome" and "irritable" with the other children. It was said that he attacked other children and required close supervision. It was suggested that he be promoted on a social basis and was finally employed in the laundry of the school because there was not enough help. However, at the end of the school year, 1944, while on vacation, he was charged and committed as above stated.

We know very little of the father and mother except that they were divorced a year prior to patient's commitment to the institution for the mentally retarded.

His subsequent institutional history indicates that the professional staff felt that his retardation was

due to a lack of hearing and the resulting speech difficulties. It is felt that the boy has considerable undeveloped resources and could progress further, not in grade work, at least in vocational work. Evidently, he had not had much opportunity for vocational guidance and training. Subsequently this boy regressed in his ability to write because of lack of individual attention and educational opportunities at the institution and he was placed in the manual training shop where he became expert in chair-caning, sewing brooms, etc. He displayed an active interest in ballgames, pitching horseshoes, and other recreational activities.

2. This 16½-year-old boy was committed to an institution for the mentally retarded on a charge of sexual assault on a minor male. He was the third child in order of birth, started to walk at 18 months and was reported normal in all other matters. He entered school at 6, and was attending the eighth grade when sent to the institution for the retarded. He was first committed to the state school for delinquent boys in 1952 and was released on parole in 1953. He was picked up by the police on complaint that he had taken indecent liberties with a 4-year-old boy. It was later learned from his mother that he had tried to perform sexual acts with a younger brother. Father is said to be a member of a family of 9 children; he cannot read or write but can sign his name. He is the proprietor of a beer parlor and has also done some work with construction companies, before he opened his shop. He has been known to indulge heavily in alcoholic beverages. In 1938 his wife secured a divorce.

Patient's mother is said to have been always the frail woman of the family. She has been subject to asthmatic attacks since age 14 at the time of the menarche. She is said to have had good marks in school and at one time was taking a correspondence course to finish high school. She always hated alcohol, but she did take it for her asthmatic attacks, chiefly brandy "prescribed by her doctor." In 1950 she took various kinds of medication and brandy and one night attempted to kill the patient by hitting him over the head with a hammer, soaking the bed linen in oil and setting it on fire. The patient, however, escaped. Mother was subsequently committed to a state hospital for observation.

Patient did not stay at the institution for more than 3 weeks because psychiatric and psychological evaluations indicated borderline to normal intelligence. He was discharged in the custody of the state school for delinquent boys.

3. This 12-year-old girl was committed to an institution for the mentally retarded in 1949 on a charge of larceny. Patient was the fourth child in order of birth; she is said to have walked and talked at 4. For some years she had been boarded in various foster homes by her father and was known to have had sexual relations with both boys and men prior to commitment to the institution. She was expelled from school because of truancy and as a behavior problem, after she had been promoted to the third grade, although her I.Q. rat-

ing was approximately 46. A few months prior to commitment, father was arrested on a charge of incestuous relations with the patient. Mother deserted father and children several years before. No other information given.

Subsequent institutional history shows that the patient became increasingly disturbed, developed delusions of persecution, visual and auditory hallucinations, and was finally transferred as psychotic to the state hospital at age 17.

4. This 16-year-old boy was committed sometime in 1945 on charges of felonious assault on his father, who might be his step-father since there is a question as to paternity.

Early medical history is uneventful.

Mother is of questionable conduct; described as mentally retarded; left her family when patient was of preschool age, after she had rejected and mistreated her children for a number of years. Father also considered mentally retarded, a seaman by trade, now deceased.

Two grandparents, several aunts, uncles, and first cousins have been convicted or sent to state institutions. Two uncles and 4 cousins have been sentenced to from 24 to 48 years in state prisons on the following charges: manslaughter, robbery, breaking, entering and larceny, indecent liberties. Eight cousins and 2 aunts and 1 sister have spent an undetermined number of years at the state school for delinquent girls. Three cousins and 2 uncles have been committed for an undetermined period to a state school for delinquent boys. One aunt was committed to a state hospital, 1 cousin to a reformatory for men, and 1 sister and 2 aunts to a reformatory for women.

We know, therefore, that the patient was raised in an atmosphere of maternal rejection, neglect, and possible abuse, of paternal ignorance and questionable paternity. To this, we can add a remarkable family record of criminality. With this background in mind, it is not surprising to read patient's institutional record:

A psychometric test at time of admission to the institution for the mentally retarded indicated a mental age of 7 years, and an I.Q. of 47. He was assigned to manual training classes but was uncooperative and refused to carry out instructions. Beginning in January of 1946, he accomplished his first escape and such attempts continued throughout his stay at the institution. In 1947 he broke into a camp with another patient, stealing clothing, rifle, shells, flashlight, etc. Subsequently he fired a shot at the game warden who attempted to apprehend him, but he was finally subdued. In accomplishing his several escapes, he did considerable damage to institutional and private property, and to his own clothing. In November of 1949 one of his escapes resulted in his apprehension in New York City. He was taken to Bellevue Hospital and eventually returned to the institution. From time to time sharpened knives, files, etc. were found on his person. He became more and more uncooperative and belligerent. On 3 occasions he had what was described as "epileptiform seizures." In February 1953 he, with 3 other patients, es-

caped, set fire to the dairy barn of the institution. They were apprehended and placed in the county jail to await grand jury action, when they were sentenced to the reformatory. At the reformatory it was reported that patient's health was good with the exception of what appeared to be attacks of epilepsy, for which he was at times hospitalized. He was tried in first-grade work, but allegedly could not absorb the data and was excused from attending. After serving his minimum sentence at the reformatory his case was taken up by the parole board and it was decided he should be taken to the Probate Court for re-commitment to an institution for the mentally retarded. Three weeks after his re-commitment he had recurring epileptic seizures for which medication was administered. He gradually acquired a persecution complex, threatened to kill attendants with a knife, developed delusions that medication given him made him crazy, threatened suicide and was obsessed with never being able to be released from the institution for the mentally retarded. Two of his fellow escapees had been paroled from the reformatory, probably because of a higher mental age. Sometime in 1954 patient developed symptoms resembling a prison psychosis and he was transferred to a state hospital.

I cannot agree with Lurie, Levy, and Rosenthal that "the defective delinquent's prognosis with regard to cure of his behavior difficulty is uniformly poor" and that "at present commitment for life to a custodial institution especially equipped to treat this type of child offers the only solution(4)".

I rather admit that there prevails an appalling lack of knowledge of what constitutes "defective delinquency" if such an entity exists at all,⁸ that generally the professional approach has been negative and remiss.

It might be of academic interest to investigate the reasons for this situation. I propose, however, that we be practical and search for constructive answers.

Already in 1951, Benda, Farrell, and Chipman(5) recommended that we "abandon as much as possible all generalizing categories and proceed to an investigation of these specific conditions with which we are dealing. Only in this way can each condition be understood and treated according to its specific need." This program should be used in our approach.

In a report of the Citizens' Committee for Children of New York, Inc.(6), it is stated that there is "no formal recognized coordination between or among Federal, state, and

local public agencies, or between public and voluntary programs in the field of mental retardation; that there is no clear allocation of public responsibility in the local community for early case finding, comprehensive diagnosis, or parent counselling; that there is today no organized program for public and professional education about mental retardation and about the needs of persons found to be mentally retarded."

I should like to add that mental retardation in its implications and consequences and with it the symptom of what we now call "defective delinquency" cannot be separated from our general social concern, expressed in public health, mental health, welfare, educational, correctional, and spiritual activities. Yet segregation is the basic idea which has excluded the mentally retarded from educational and social community activities and advancements, which has sent thousands of patients to state institutions for a predominantly custodial life of deprivation and confinement.

Because of a remarkable degree of professional resistance and ignorance, starting at our graduate schools of education, social work, psychology, and even in our foremost medical schools, the symptom of mental retardation has yet to emerge as a generally accepted matter of scientific concern and professional status(7).

At the institutional level we observe a pathetic lack of facilities and staff which is matched by remarkably overcrowded dormitories and long waiting lists. In this atmosphere behavior disorders are events which disturb the functions of the institution, disrupt the staff, and contribute materially to low morale among patients, staff, and patients(1, 2, 3).

These facts present an extraordinary challenge: Our thinking on the symptom of mental retardation is in a stage of transition. Establishment of special classes and provisions for refined educational techniques and services at the community level coincide with the trend to social integration of the retarded in the family and in community sheltered workshops.

This process demands that we give serious thought to investigating the changing functions of our institutions for the mentally retarded.

⁸ The Diagnostic Manual of the American Psychiatric Association does not list "defective delinquency" as a diagnostic entity.

There is an obvious trend to send to our institutions children who present psychiatric disorders which cannot be taken care of in the community, or who are so severely retarded that they require protection and a form of training which the community does not provide(9). This means that our institutional programs will require revision, that our staffs will have to adjust to more problems, to search for new answers and therefore to consider scientific research as an essential and necessary part of every institutional operation(8). Our treatment programs will have to be based:

1. On the well-established recognition that we are engaged in a multidisciplinary activity. The mentally retarded patient presents complicated and challenging diagnostic and treatment problems in the fields of medicine, clinical psychology, special education and social work. The so-called ancillary services, occupational, recreational, physio- and hydrotherapies, music therapy, speech therapy, nursing care, etc., have become an integral part of treatment.

2. On modern diagnostic processes: detailed history of the presenting symptoms including pertinent medical data of the prenatal, paranatal, and postnatal development, psychological evaluation, detailed social history to permit a thorough understanding of the patient's environment, clinical examination to include evaluation of vision, hearing, speech, motor coordination, of serological, hematological and chemical tests, of a psychiatric evaluation wherever it applies, integration and coordination of all findings in the diagnostic staff conference where etiological factors will be identified, where a working or final diagnosis is arrived at and where prognosis and a comprehensive treatment program are being formulated.

3. On sufficient understanding and co-operation between the various services to effect, as much as humanly possible, staff accord in carrying out treatment for the individual patient.

This approach places a heavy responsibility on the administrative officer and the various department heads who have to plan and present an operating budget to provide the services and facilities necessary. They must use all proper means of public education, public relations, and communications, to gain

the institutional objectives by convincing citizens and their legislative representatives of the need for the requested funds.

Recruitment of professional and non-professional staff often will require reconsideration of job classifications at the local as well as at the state level, establishment of competitive salary schedules and of scholarships for graduate studies if we are to find the people to do the job.

Our building program must include provisions for treatment and dormitory facilities for disturbed patients. Functional architectural design to create a proper atmosphere must gradually replace the overcrowded mass quarters of the custodial care era, when it was important to detain as many "inmates" and as cheaply as possible. We will have to plan to locate any new institution which might be planned for the mentally retarded close to existing medical centers to overcome our professional isolation and to benefit from, as well as contribute to, existing clinical, academic, and research programs.

There is an increasing awareness of these changes. However, we have still a long way to go until we can practice what we have recognized to be necessary for successfully dealing with mental retardation. Until this time I am inclined to replace the term "defective delinquency" with "social delinquency."

BIBLIOGRAPHY

1. Bowman, P. W. *J. Maine Med Assoc.*, **46**: 288, 1955.
2. Westwell, A. E. *Am. J. Ment. Def.*, **56**: 283, 1951.
3. Board, R. G. *Am. J. Psychiat.*, **113**: 332, 1956.
4. Lurie, A. L., Levy, S., and Rosenthal, F. M. *Am. J. Orthopsych.*, **14**: 95, 1944.
5. Benda, C. E., Farrell, M. J., and Chipman, C. E. *Am. J. Psychiat.*, **107**: 721, 1951.
6. Citizens' Committee for Children of New York City, Inc. Report to Joint Legislative Committee on Mental Retardation, Nov. 1955.
7. Bowman, P. W. Preventive Aspects in Mental Health. Governor's Conference on Human Resources, Augusta, Maine, June 1956.
8. Bowman, P. W. "Rewards" and "Punishments" in a School for the Mentally Retarded. Eightieth Annual Meeting, A.A.M.D., Richmond, Va., May 1956.
9. Farrell, M. J. Personal communication (contained in chapter, "Mental Retardation," of a new textbook on psychiatry to be published), 1956.

IS THE HUMAN PERSONALITY MORE PLASTIC IN INFANCY AND CHILDHOOD? ¹

IAN STEVENSON, M.D.²

"The doctrines which best repay critical examination are those which for the longest period have remained unquestioned."

A. N. WHITEHEAD

No assumption of modern psychiatry enjoys greater acceptance than the belief that human personality is more plastic in infancy and childhood than in later years. Although widespread today, the belief belongs to modern times. The writings and practices of ancient Greece and Rome showed great concern for the education and training of children; and no less for those of adults. We cannot say exactly when the modern emphasis on childhood training and relative neglect of adult training began. In the 16th century St. Ignatius made a clear statement of it. He declared that if he could have the teaching of a child until the age of 6, he did not care who instructed him afterwards. He firmly believed that nothing could undo the teachings of the early years. From about this time on, a belief in the paramount importance of childhood experience in the formation of personality forms a central doctrine of many systems of psychology (1, 2).

A balanced view of the contributions of heredity and environment to human personality slowly emerges in our literature (3, 4). Extreme positions in this old controversy no longer appeal, and none will be adopted in this paper, for the question at issue is not whether environment or heredity contributes more to the formation of human personality, but whether the contribution of environment occurs unevenly. The environment plays upon the organism from the moment sperm and ovum unite until the end of life. *A priori*, we have no grounds for believing that the environment exerts greater force at one period than at any other. Some proponents of this belief have said that the helplessness and

necessary dependency of the infant upon his parents account for his susceptibility to their influence, but this is to offer an explanation of an assumption rather than a foundation for it. Helplessness and dependency do not necessarily render the personality more malleable if we may judge by the behavior of the sick and the aged.

Diverse observations made over the past 10 or 15 years throw doubt on the assumption of an uneven distribution of environmental effects. Taken together they provide a rather formidable obstacle to its acceptance. They do not disprove the assumption, but they threaten seriously the claim that it is already proven. I shall consider the data which have brought me to this conclusion under 4 arbitrary headings, any one of which may include material relevant to another aspect of the problem.

REVIEW OF RELEVANT DATA

CHILD TRAINING PRACTICES AND THE LATER FORM OF THE PERSONALITY.

The literature of psychiatry abounds in articles asserting causal connections between the early experiences of life (especially training practices) and the later personality. The far fewer articles reporting objective studies of such relationships fail to support the assertions made (5, 6, 7, 8, 9). Thurston and Mussen (5) contribute a review of earlier studies in addition to their own negative empirical study. Orlansky (8) and Lindsmith and Strauss (9) have reviewed the empirical studies and concluded that the published data fail to demonstrate a consistent relationship between child training practices and adult personalities.

Studies of the relationships between child rearing practices and adult personality frequently fail to define clearly the traits under scrutiny. A notable exception is the research of F. Goldman-Eisler (14) into the connection between breast feeding and the later exhibition of traits of "orality." Goldman-

¹ Read at the 112th annual meeting of The American Psychiatric Association, Chicago, Ill., April 30-May 4, 1956.

² Address: Dept. of Psychiatry and Neurology, School of Medicine, University of Virginia, Charlottesville, Va.

Eisler subjected the data derived from careful studies of her adult subjects to a factorial analysis from which emerged a definite correlation between the kind of breast feeding experienced (*i.e.*, early weaning or late weaning) and the later occurrence of certain personality traits (characterized respectively as orally ungratified and orally gratified types). The fact of a correlation is thus clear, but it is open to two interpretations. The later personality may arise from the impact of the earlier experiences, but Eysenck(15) has pointed out that genetic factors may also account for the correlation in the following way. The polar oral types (gratified and ungratified) correspond rather closely to the extravert-introvert dichotomy familiar in Jungian psychology. We may plausibly suppose that introverted mothers tend to have introverted offspring through genetic factors alone, and that introverted mothers also tend to wean their infants earlier than do extraverted mothers. Thus the established correlation may arise from either genetic or experiential factors. The question of which explanation is the correct one must await further research.

It may be objected that parents influence their children through their attitudes to the children and that the actual training practices they adopt are of quite secondary importance. This shifts the argument to another area, but one in which there are even fewer objectively derived data. Nothing is gained by inferring attitudes on the part of the parent from the specific child training practices for, as mentioned above, no causal connections have been demonstrated between the training practices and the later personality. Moreover, no correlations have been demonstrated between child training practices and the attitudes of parents towards children. Some authors have claimed, for example, that early bowel training implies compulsive rigidity on the part of the mother or that late weaning reveals indulgence and affection. Yet the same training practices occur in widely different cultures in which the parents seem to take up quite different attitudes towards the children. One particular training practice, *e.g.*, restraint of infants, may occur in many different cultures, but in each of these cultures occur other child training

practices which differ(8). The occurrence of one or even several particular child training practices permits no valid inference either about other training practices in the same family or culture, or about the over-all attitude of the parents to the children(10). The statements of patients concerning the attitudes of their parents towards them as children obviously deserve no credence when we are studying the origins of the personalities of the patients. In the first place, these personalities may have provoked the alleged parental attitudes, and secondly, patients can wildly distort the attitudes of their parents in reporting them.

When it becomes possible to observe, rather than merely assume the attitude of parents towards children, an important connection between these attitudes and the behavior of children can sometimes be demonstrated. Johnson and Szurek studied a number of children and their parents in therapy. In this way they related the attitudes and suggestions of the parents to the children and the behavior of the children. Parental attitudes and impulses, often unconscious and communicated covertly, promoted a wide variety of psychophysiologic and sociopathic symptoms in these children(11, 12, 13). Nothing could demonstrate better the influence of one human on another. But the questions of interest to us here are whether parents exert a permanent influence on children and whether they exert a greater influence on children than upon each other. These questions the studies of Johnson and Szurek cannot, and were not intended to answer.

CHILD TRAINING PRACTICES AND THE OCCURRENCE AND FORM OF LATER MENTAL ILLNESS

If the experiences of childhood importantly influence the later personality, we should expect to find some correlation between such experiences and the later occurrence of mental disorders. In fact, no such correlations have ever been shown.

Moloney reported an exceedingly low incidence of mental illness among the Okinawans(21). He concluded that the child rearing practices of the Okinawans (which include a great deal of oral gratification and

affection) fortify them against the occurrence of mental illness; yet Moloney's figures of admissions to hospitals for mental illness provide no reliable estimate of the real incidence of mental disease in Okinawa. At the time of Moloney's observations, the admissions to hospitals for psychiatric disorders must have reflected quite inadequately the incidence of mental illness among these people. Moloney himself comments on 3 factors which alone would throw doubt upon the usefulness of the figures he quotes. There were almost no psychiatric facilities on the islands; the natives kept the mentally ill at home; and they treated the mentally ill with derision and more serious forms of cruelty, including physical violence. (Parenthetically, this last feature of their behavior might make one doubt the purported absence of mental illness which in Moloney's paper was apparently defined as psychosis.) These factors would all tend to reduce the admissions to hospitals, but not the occurrence of mental illness.

But apart from the questionable validity of Moloney's figures, a study of Okinawans in Hawaii (where the Okinawans continue the same child rearing practices) showed that this racial group has a considerably higher incidence of mental illness than other racial groups in Hawaii (17). Thus even if we grant that Okinawans adjust well to the circumstances of their own islands, they apparently adjust less well than other groups to certain changed circumstances and have no special immunity to mental disorder.

If good mothering does not confer protection against mental disorders, it may be that bad mothering or lack of mothering promotes mental disorder. On this subject there are more data, although none that can permit generalizations. Anna Freud studied a group of children who had been unusually deprived, through the exigencies of war, of all that is generally considered necessary in the way of good mothering care (23). Yet these children made remarkably good adjustments, perhaps since they were in a group obtaining from each other what they did not get from a mother. This subject will be taken up again later.

It is frequently alleged that parental attitudes contribute to the formation of a per-

sonality specially susceptible to schizophrenic reactions. Yet different studies on the parents of schizophrenic patients fail to show consistent portraits of the personalities of the parents or to confirm the popular stereotype that the mothers are excessively anxious, domineering and solicitous with regard to the child who later becomes schizophrenic (16, 17, 18, 19). Moreover, the parents of a child who later becomes schizophrenic more often than not have raised other children who developed normally. No doubt studies of environmental influences on the formation of personalities predisposed to psychoses labor under severe handicaps. This should make us more rather than less cautious in attributing psychoses to such influences. We should be all the more cautious in view of the much clearer evidence of important genetic factors underlying psychoses (20).

That the forms of mental illness vary widely in different parts of the world is abundantly clear from comparative studies (24, 25, 26, 27). Some of these differences arise from disagreements between different cultures as to what constitutes a mental illness. Forms of behavior which are considered psychotic in our culture may find acceptance and even approval in another. However, apparently similar mental disorders, *e.g.*, schizophrenia, do show somewhat different forms in different cultures (25, 27). Psychotic patients in India (25) and in Japan (26) apparently exhibit much less violent behavior than is customarily seen in the mental hospitals in the West, but we have no data which might permit us to attribute such differences exclusively to training in infancy. For in India passivity, and in Japan obedience and obligation, form a central part of the training not of infants only, but of every one of any age.

THE EFFECTS OF ISOLATION IN CHILDREN AND ADULTS

That the isolation of children from other human beings can exert a markedly destructive effect on personality has been known for centuries (28). Recently a number of studies have tried to sharpen our understanding of the effects on infants and children of isolation and the concomitant deprivation (29, 30).

31, 32). The work of Spitz has drawn widespread attention and been generally interpreted to confirm the importance of adequate mothering during infancy and childhood. Spitz compared 2 groups of infants who were apparently raised in similar physical circumstances. One group received abundant mothering, while mothering attentions were sharply curtailed in the other group. The second group compared to the first, showed an increased morbidity and mortality and a failure to develop. Pinneau has criticized Spitz's work on the grounds that he failed to allow adequately for a number of factors which could have accounted for the differences between the 2 groups, *e.g.*, genetic differences, and different exposures to diseases such as measles which carried off many of those who died in the deprived group(33). But even if we grant that Spitz's data support his conclusion concerning the harmful effects of isolation on infants, two further questions remain. Are such effects any less in adults? What is the duration of such effects on infants? I shall take up the first question next and return to the second later.

In general human beings are rarely as cruel to adults as they often are to children. It is difficult to find an adult situation which resembles exactly the predicament of institutionalized infants. One approximately comparable situation may occur during the artificial reduction of sensory stimuli as in the experiments of Heron(34, 35) and Lillie(36). The subjects of these experiments were isolated almost completely from sensory stimuli. Institutionalized infants are usually isolated from close human (so-called affective) contact rather than from all sensory stimuli. However, in the "Foundling Home" studied by Spitz(30) the babies received a greatly reduced sensory stimulation due to screening sheets around the cots and high walls between the cubicles. Such features make the situation of these infants resemble rather closely that of the adult experimental subjects under discussion, although there are also differences.

In the experiments with adults, the subjects experienced tension and anxiety which were followed in those who could stand the

experience long enough by marked disorders of perception and thinking. Hallucinations and delusions occurred in some of the subjects. Few subjects could tolerate these experiences for more than a day or two at most. For this reason the possible effects of prolonged sensory isolation could not be estimated from such experiments.

Another adult situation with some resemblance to that of institutionalized infants occurred in concentration camps(37, 38, 39, 40) and in some camps for prisoners of war(41, 42). In these camps the prisoners were not isolated from other people or from stimuli. However, the people with whom they were in contact were unable to provide them with anything like the usual amounts of psychological support because they were either hostile guards or fellow-prisoners who were in the same desperate plight themselves. It cannot be said that loss of affection was the only stress to which the prisoners were exposed. Most suffered from malnutrition and many were subjected to physical maltreatment. However, it seems reasonable to conclude that the main stresses were psychological from the following facts: first, marked responses occurred almost immediately and before the effects of starvation could have influenced behavior; secondly, the psychological responses were greater than those accompanying starvation alone(43, 44); and thirdly, the responses to the situation were far from uniform among those who were receiving the same diet and mistreatment. Different responses could be correlated with different attitudes and personalities(38, 42). Parenthetically, children adapted to concentration camps much more readily than adults and the aged least of all(37).

Turning to the observed responses of inmates of concentration camps and prisoners of war camps, we find an extraordinarily high incidence of psychological disturbances. Severe apathy occurred almost universally; almost as common was the exhibition of fiercely self-interested and hostile behavior. For many prisoners the psychological effects were even more devastating and extended to stuporous states, dissociated states and death. Some of the inmates deliberately committed suicide by annoying the guards to the point

where the guards shot them or by running against the electrified wires around the camp. Many prisoners died without sufficient apparent physical cause and hence presumably from the psychological effects of their situation. It is naturally impossible to estimate the incidence of psychoses, suicides, and other deaths from psychological reasons in these camps, nor is it possible to estimate the total duration of the effects, although for many persons the effects are known to have lasted for many years.

As I said earlier, the experiments of sensory isolation and the stresses of concentration camps certainly do not exactly resemble the situation of institutionalized infants. Nevertheless the situations have enough resemblance to permit a comparison in which adults appear no stronger than infants. The point of making such a comparison is not to suggest that infants cannot be damaged by isolation, but to remind ourselves that adults are no less vulnerable. The response of infants to isolation is not an infantile one, but a human one. Studies of the effects of isolation on infants teach us the importance of affection to all humans; they cannot prove its greater necessity for children than for adults.

IMPERMANENCE OF PSYCHOLOGICAL SYMPTOMS OF CHILDHOOD

Many studies on institutionalized infants and on children with psychological disorders have not included lengthy follow-ups to observe their later course in life. In the studies of institutionalized infants by Spitz (30, 31, 32) and Bender (45) the children were followed only to early childhood. Gorfelfarb (46, 47, 48) followed a similar group of infants into early adolescence. In all these observations although the children showed variations in development, in general their maturation and adjustments fell far behind those of children raised under normal circumstances.

However, Beres and Obers (49) followed into late adolescence and early adulthood a group of infants who had been reared in institutions comparable to those of the other

studies cited. Of this group approximately half were judged to have made a satisfactory social adjustment. This seems like a remarkable degree of improvement, especially in view of the fact that such children are poorly endowed genetically, having usually unmarried or mentally ill mothers.

Caplan studied the children raised in the communal agricultural settlements of Israel (50). The rearing of these children is largely in the hands of professional workers who care for groups of children. The children live in nurseries and later in schoolhouses with other children of the same age. They spend some time with their biological parents, but nearly all the training and discipline are in the hands of the professional workers. Any one child will experience two changes of workers between birth and 3 years of age. The children become strongly attached to the members of their own group who apparently signify as much for them as do the members of their biological families. They usually remain with the same group until adolescence. The important observations of these children are that in their early years they show marked signs of psychological disturbance, *e.g.*, temper tantrums, thumb-sucking, and enuresis, but that in adulthood they are remarkably healthy both physically and mentally.

A somewhat similar transformation was observed in a group of 54 severely shy, anxious and withdrawn American children, who were disturbed enough to be examined in a child guidance clinic (51). At the time of the original evaluation, the children had a median age of about 7 years. They were then studied again 16 to 27 years after the initial evaluation. Two-thirds were found to be making a satisfactory adjustment and one-third a marginal adjustment. Those in the latter group were distinguished from the former by not fulfilling all their potential or deriving as much enjoyment from life as seemed possible. Nearly all of these children had married when they reached adulthood; many had married outgoing wives with whom they shared an active social life. Of the entire group only 2 were considered ill and only 1 of these was schizophrenic.

DISCUSSION

The data reviewed above throw doubt upon the belief that the events of infancy and childhood are necessarily more formative of personality than those of later years. None of the data reviewed conflicts with the established fact of human influence on human beings, or with our knowledge that the impact of one stress with a resultant strain modifies the response to a succeeding stress. What comes first influences the response to what comes after. The events of infancy and childhood will always have much importance because of their temporal precedence, but perhaps not because of any special fragility of the personality in those years.

This raises the question of the duration of the effects of a particular experience. As already mentioned, the assertion that the events of infancy and childhood always exert a special influence in forming the adult personality is still a statement of opinion, not of fact. Nevertheless, there are many reactions of adulthood which seem to repeat or imitate those of infancy and childhood. We may account for such resemblances in a number of ways without recourse to the hypothesis of a special impressionability of the personality in infancy and childhood.

ORIGINS OF RESEMBLANCES BETWEEN BEHAVIOR IN CHILDHOOD AND ADULTHOOD

The first possibility in accounting for such resemblances is that a conditioned response fails to extinguish because of some innate characteristic within the subject. Experiments in conditioning show that extinction of a learned response ordinarily occurs rather steadily in the absence of further reinforcement. The learned response is greatest immediately after the conditioning experiences and lessens progressively. However, we know that fears and other learned responses often fail to extinguish and, on the contrary continue an active and irrational course for many years. But we also know that the same events which stimulate such unextinguishing fears in some persons fail to do so in others. They may even have the opposite effect. An event which proves traumatic to one person may strengthen another.

The difference presumably lies in the way the event is experienced; that is, in the response the person makes to the stimuli which events bring him. But we have no reason to believe that infants are more liable to experience events in a fearful way than are adults. The capacity to acquire a fixed, irrational fear or other learned response is found in adulthood as much as in childhood, and perhaps more so.

Years ago, Breuer and Freud(52) remarked that "the hysteric suffers mostly from reminiscences." This is true, but it does not follow and has never been shown that the events of which the reminiscences are partial and distorted memories differ significantly for such patients, (or other patients with psychological disorders), from those experienced by other persons. As already suggested, the events of childhood may be experienced differently by the psychoneurotic patients. Or alternatively, the patients' childhood experiences are not unusual, but the patients later attribute a painful quality to them when viewed retrospectively from the current discomforts of adulthood, and mixtures of these processes may occur, because when a person has difficulty in mastering a current conflict, he can readily find comfort in attributing his difficulty to previous supposedly damaging events.

Resemblances between infantile or childish and adult responses may occur also when a series of reinforcements has followed the first harmful experiences of childhood. One harmful stimulus may succeed another so closely that the infant or child cannot recover his balance in time to react favorably to any event. This is perhaps an important factor in the devastating effects of institutions on infants and of prison camps on adults. The stress is unrelenting and harmful effects sustained. We have then not a personality "fixed" by early harmful events, but one bombarded by a continuous succession of harmful events. However, in ordinary life this situation must be rather exceptional. Few children meet unrelenting cruelty or neglect. Suffering children rather readily evoke a tender response in those around them. Most children encounter opportunities to unlearn whatever negative responses they

may previously have learned. If they fail to do so we can as plausibly attribute the difficulty to an innate defect of responsivity as to the severity of the previous stresses.

The most harmful of all experiences seems to be a deprivation of stimuli. Apparently growth cannot occur in the absence of stimuli from the environment. Institutionalized and isolated infants lack this stimulus and so fail to develop the qualities necessary for growth promoting contacts at the next stage of development. They thus fall behind their more stimulated contemporaries. But like those children who receive harmful stimuli, many of these isolated children do respond later to stimuli when they receive them. As mentioned in the preceding review of data, many of them eventually "catch up" with other more fortunate children of the same age (49). Since some institutionalized children can respond favorably to stimulation after infancy, the different responses to later experiences may lie in constitutional qualities rather than in the severity of deprivation.

Resemblances between childish and adult responses may occur when both express the unchanged character of the personality without having any causal connection. Infants at birth show wide variations in their spontaneous behavior and in their responses to stimuli (53, 54, 55, 56, 57). They exhibit the *anlage* of their fully developed characters. For example, Gesell (58) demonstrated in young infants the first expressions of fundamental traits of personality, *e.g.*, motor activity, affection, humor, curiosity, tolerance for frustration, etc. The infants studied showed these traits before the impact of parental behavior could have had anything to do with their origin. At 5 years of age the children exhibited the same traits, although in a more developed form, with remarkable consistency. It seems reasonable to suppose then that many of the responses of infancy and childhood may be not the causes of character, but their expression. To say this is not to deny that character can be changed through experiences, but as mentioned earlier, it is changed by the way in which events are experienced rather than by the events themselves.

Still another resemblance between infan-

tile and childish responses may occur in the process of regression, in which the adult returns to a previous pattern of behavior. But regression indicates a current stress too great for mastery. Like sleep, it is something of which we all are capable. The fact of returning to childlike behavior does not mean that the events of childhood were especially severe, or even especially important for the personality who regresses, although they may have been.

There exist then a number of ways in which adult responses to stress may come to resemble infantile or childish ones. In each of these ways we can account for the resemblance without the hypothesis of a special impressionability of the infantile personality which would make the events of the early years necessarily more important to the growth of the personality than those of later years.

SIGNIFICANT DIFFERENCES BETWEEN THE PERSONALITIES OF CHILDREN AND ADULTS

The problem may receive some further clarification from considering the important differences between the personalities and behavior of infants (and children) and adults.

We know that infants lack coordination and skill in the use of their musculature. We may assume, although we cannot positively know, that infants also lack the organization of perceptions and thoughts which comes in later life; yet we cannot deduce from these facts and assumptions a greater sensitivity to environmental influence. If we were to accept a comparison of the infantile mentality with that of the dreamer or the delirious patient, we would expect the infant to be less susceptible to outside influences than he is when his mind is more fully developed.

Impressionability in infants and children may arise from another important difference between them and adults. Infants and children lack past experience (memory) with which to evaluate current events, but this means that events have a different significance for the infant and child than for the adult. The infant and child respond to events according to their meaning for them. We have no grounds for believing that events are necessarily more meaningful or more irre-

quently given harmful meanings in infancy than in adulthood. They simply have different meanings. If you take a toy away from a child, he will probably cry, but if you tell him the mortgage has been foreclosed he will probably go on playing with the toy. We have no proof that within the world as he sees it, a stress is any harder to bear in infancy than in adulthood.

The experiential deficiencies of children do, however, place them at a special disadvantage in relationships with adults. Their fund of information is largely drawn from the supplies of parents. Children are like the country bumpkin in the hands of the city slicker. They are the perpetual captive audience of their parents. Their ignorance makes them more suggestible than adults. However, tests of suggestibility show that this reaches a peak in the years from 7-9 and thereafter falls off, being lower for obvious reasons in infancy and also in adulthood (58). In view of the marked influence of suggestion on personality, we may eventually have to ascribe special importance in the formation of personality to the years 7-9 as much as to the years of infancy and early childhood.

The physical helplessness of children which ties them for many years to one family greatly reduces the opportunities for the correction of faulty information provided by the parents. The ordinary adult has many more opportunities for increasing his experiences than the child who must largely live in a world of experiences chosen for him. The immobility of the infant makes him particularly dependent upon adults for stimuli with which to grow. (The prisoner in a concentration camp has the same inability to modify his experiences). Thus it happens that a great many persons reach adulthood with large areas of living completely unexplored. Some of the impression that personality becomes fixed in childhood may arise from the widespread constriction of experiences in many children and adults. Their personalities fail to change, not because they have permanently jelled, but because they never have the new experiences which seem essential for any change. Parenthetically, psychotherapy provides one kind of intense contact which can modify and undo the effects of the experiences of childhood. Psy-

chotherapeutic transformations of personality in adulthood should additionally warn us against viewing the adult personality as rigidly fixed in childhood.

Infants and small children exhibit a further difference from adults which at first glance may seem to make them more sensitive to environmental stimuli. Their emotions are less organized, less inhibited, and less suited to the occasion than those of most adults. Excessive or inappropriate emotional expression perhaps more than any other quality gives rise to the epithet "childish" when seen in adults. Yet from the fact that children's emotions lack the refinements of direction and discharge found in most adults, we cannot argue that children are thereby experiencing more durable effects from the events to which they respond. Such durable harmful effects seem to come much more often from the inhibition of emotional expression than from the reverse. Indeed, there may be a connection between the ability of children to express emotions freely and their well-known resilience to frustration. Very commonly a punished child becomes ready to forgive an angry parent long before the parent has recovered from his own anger (or guilt). Such resilience in turn probably accounts for the rarity in childhood of the prolonged hatreds and guilts which burden so many adults. As mentioned earlier, children adapted best of all to the horrors of concentration camps, and they can adapt in ways astonishing to adults to a wide variety of new situations. Such adaptability is not consistent with the view that children are more liable to show lasting effects of stresses than adults. What we know of the emotional life of children suggests that they may indeed be more impressionable than adults, but also more expressive of responses and less retentive of harmful effects. In short, their minds may be wax to receive, but not marble to retain the imprint of events.

This review permits no conclusions on this topic, except of the need for research. Such research may ultimately confirm in a scientific manner the belief that human personality is more plastic in infancy and childhood than in adulthood. Alternatively, it may show this assumption to have been a scientific myth. A

third and more probable result may be the demonstration that the human personality is more plastic during the early years in certain modalities and less plastic in others, and similarly we may find that adults can change more readily than children in some areas and less so in others.

SUMMARY

The article reviews data, much of rather recent origin, bearing on the assumption that human personality is more plastic in infancy and childhood than in adulthood. The available data permit the following conclusions:

1. We have no compelling evidence of a predictable relationship between child training practices and later personality.

2. Severe psychological stresses can have as marked effects in adulthood as in infancy and childhood, sometimes having greater effects in adulthood than in childhood.

3. Important personality changes occur after childhood (in the absence of treatment) including the disappearance of marked psychological disorders.

4. Infants reared according to ostensibly ideal methods of infant care show no greater immunity to mental illness than do other children reared differently. Infants reared under apparently inadequate or harmful circumstances do not necessarily develop psychological disorders.

5. Resemblances between patterns of behavior in children and adults can be explained without the hypothesis of a special impressionability or vulnerability of personality in childhood.

6. The initial immobility and the prolonged physical dependency of children upon adults places them at a special disadvantage in that they cannot readily change their environments to obtain new experiences. A lack of new experiences may give to the personality a pattern which appears more fixed than it really is.

The assumption that the human personality is more plastic in infancy and childhood than in adulthood remains unproven. Neither is it disproven. We need much further research in this area and this research may eventually show that the human personality is more plastic during childhood in some respects, but not in others.

BIBLIOGRAPHY

1. Davies, J. D. *Phrenology: Science and Fad*. New Haven: Yale University Press, 1955.
2. Freud, S. *A General Introduction to Psychoanalysis*. New York: Garden City Publishing Co., 1920.
3. Fuller, J. L. *Nature and Nurture: A Modern Synthesis*. New York: Doubleday & Co., 1954.
4. Gerard, R. W. Pub. in: *The Biology of Mental Health and Disease*. New York: Paul B. Hoeber, Inc., 1952.
5. Thurston, J. R., and Mussen, P. H. *J. Personal.*, 19: 449, 1951.
6. Sewell, W. H. *Am. J. Sociol.*, 58: 150, 1952.
7. Sewell, W. H., and Mussen, P. H. *Child Development*, 23: 186, 1952.
8. Orlansky, H. *Psychol. Bull.*, 46: 1, 1949.
9. Lindsmith, A. R., and Strauss, A. L. *Am. Sociol. Rev.*, 15: 587, 1950.
10. Sewell, W. H., Mussen, P. H., and Harris, C. W. *Am. Sociol. Rev.*, 20: 137, 1955.
11. Johnson, A. M., and Szurek, S. A. *J.A.M.A.*, 154: 814, 1954.
12. Johnson, A. M., and Szurek, S. A. *Psychoanal. Quart.*, 22: 323, 1952.
13. Johnson, A. M. *Psychoanal. Quart.*, 22: 475, 1953.
14. Goldman-Eisler, F. *J. Ment. Sci.*, 97: 313, 1951.
15. Eysenck, H. J. *The Scientific Study of Personality*. London: Routledge & Kegan Paul, Ltd., 1952.
16. Reichard, S., and Tillman, C. *Psychiatry*, 13: 247, 1950.
17. Tietze, T. *Psychiatry*, 12: 55, 1949.
18. Prout, C. T., and White, M. A. *Am. J. Psychiat.*, 107: 251, 1950.
19. Hotchkiss, G. D., Carmen, L., Ogilby, A., and Wissenfeld, S. *J. Nerv. & Ment. Dis.*, 121: 452, 1955.
20. Kallman, F. J. *Heredity in Health and Mental Disorder*. New York: W. W. Norton & Co., 1953.
21. Moloney, J. C. *Psychiatry*, 8: 391, 1945.
22. Wedge, B. M. *Am. J. Psychiat.*, 109: 255, 1952.
23. Freud, A., and Dann, S. *An Experiment in Group Upbringing*. Pub. in: *Psychoanalytic Study of the Child*, 6: 127, New York: International Universities Press, 1951.
24. Yap, P. M. *J. Ment. Sci.*, 97: 313, 1951.
25. Gold, H. R. *Am. J. Psychiat.*, 108: 462, 1951.
26. Jacobson, A., and Berenberg, A. N. *Am. J. Psychiat.*, 109: 321, 1952.
27. Steinbrook, E. *Am. J. Psychiat.*, 109: 330, 1952.
28. Stone, L. J. *Child Development*, 25: 9, 1954.
29. Ribble, M. *The Rights of Infants*. New York: Columbia University Press, 1943.
30. Spitz, R. A. *Hospitalism*. Pub. in: *Psychoanalytic Study of the Child*, 2: 53, New York: International Universities Press, 1945.
31. Spitz, R. A. *Hospitalism, A Follow Up Report on Investigation*. Pub. in: *Psychoanalytic*

Study of the Child, 2:113, New York: International Universities Press, 1946.

32. Spitz, R. A. Anaclitic Depression. Pub. in: Psychoanalytic Study of the Child, 2:313, New York: International Universities Press, 1946.

33. Pinneau, S. R. Psychol. Bull., 52:453, 1955.

34. Heron, W., Bexton, W. H., and Hebb, D. O. Am. Psychologist, 8:366, 1953.

35. Hebb, D. O. Am. J. Psychiat., 111:826, 1955.

36. Lilly, J. C. Effects of Psychical Restraint and of Reduction of Ordinary Levels of Physical Stimuli on Intact, Healthy Persons. To be published in GAP reports.

37. Kral, V. A. Am. J. Psychiat., 108:185, 1951.

38. Bondy, C. J. Abn. & Soc. Psychol., 38:453, 1943.

39. Bettelheim, B. J. Abn. & Soc. Psychol., 38:417, 1943.

40. Frankl, V. E. Ein Psycholog erlebt das KZ. 2nd ed. Vienna: Verlag fuer Jugend und Volk, 1947.

41. Brill, N. Q. Bull. U. S. Army Med. Dept., 5:429, 1946.

42. Nardini, J. E. Am. J. Psychiat., 109:241, 1952.

43. Schiele, B. C., and Brozek, J. Psychosom. Med., 10:31, 1948.

44. Keys, A. The Biology of Mental Health and Disease. New York: Paul B. Hoeber, Inc., 1952.

45. Bender, L., and Yarnell, H. Am. J. Psychiat., 97:1158, 1941.

46. Goldfarb, W. J. Experim. Educ., 12:106, 1943.

47. Goldfarb, W. Am. J. Psychiat., 102:18, 1945.

48. Goldfarb, W. Am. J. Orthopsychiat., 17:449, 1947.

49. Beres, D., and Obers, S. J. The Effects of Extreme Deprivation in Infancy on Psychic Structure: A Study in Ego Development. Pub. in: Psychoanalytic Study of the Child, 5:212, New York: International Universities Press, 1950.

50. Caplan, G. Clinical Observations on the Emotional Life of Children in the Communal Settlements in Isreal. Pub. in: Problems of Infancy and Childhood. New York: Josiah Macy, Jr. Foundation, 1954.

51. Morris, D. P., Soroker, E., and Burruss, G. Am. J. Orthopsychiat., 24:743, 1954.

52. Breuer, J., and Freud, S. Studies in Hysteria. New York: Nerv. and Ment. Dis. Monographs No. 61, 1950.

53. Fries, M. E., and Wolf, P. J. Some Hypotheses on the Role of the Congenital Activity Types in Personality Development. Pub. in: Psychoanalytic Study of the Child, 8:48, New York: International Universities Press, 1953.

54. Richmond, J. B., and Lustman, S. L. Psychosom. Med., 17:269, 1955.

55. Marquis, D. P. Psychol., 32:123, 1943.

56. Gesell, A. Scient. Monthly, 45:217, 1937.

57. Leitch, M., and Escalona, S. K. The Reactions of Infants to Stress. Pub. in: Psychoanalytic Study of the Child, 3-4:121, New York: International Universities Press, 1949.

58. Hull, C. L. Hypnosis and Suggestibility. New York: Appleton-Century-Crofts, Inc., 1933.

DUPLICATION, DOUBLE ORIENTATION AND FUSION¹

MAX LEVIN, M.D.²

In a recent article(4) it was pointed out that disorientation is not a uniform phenomenon, always following the same pattern, but that its pattern varies depending on its cause. The disorientation of toxic delirium differs from that seen in some cases of schizophrenia, which in turn differs from that seen in some cases of brain tumor.

Duplication and double orientation are among the symptoms that have come under study in consequence of the recent surge of interest in the more complex manifestations of tumor and other cerebral lesions. As an example, a patient at the Mt. Sinai Hospital (7) thought there were two hospitals of that name, the one in which she was at the moment being four blocks from home. In reality she lived six miles from the Hospital.

Three cases will serve as a starting point for this discussion:

1. Kubie(1) made an observation in Penfield's operating room. While counting slowly from one to 10 the operator stimulated "a certain temporal area," whereupon "the patient said, 'Now the numbers seem to be doubled,' an impression which ceased the instant the current was discontinued, the impressions fusing at once and becoming, in the patient's words, 'single and clear.'"

2, 3. Weinstein, Kahn and Sugarman's(7) patient M. S., who had a brain tumor, had a son William whom she usually called Bill. She now said she had twin sons, Bill and "Willie." Another patient had one living sister Margaret, nicknamed Maggie, and now she said she had two sisters, Margaret and Maggie.

Kubie's observation throws light on the function of fusion. A sound excites two auditory reception areas, one in each temporal cortex, but we hear *one* sound, not two, because a higher coordinating mechanism "fuses" the substrates of the two auditory images. If we disturb ocular fusion by dislodging the axis of one eye, we see double. In Kubie's case the stimulation caused the patient to *hear* double.

The double hearing occurred on stimula-

tion. Does this mean that the area stimulated contains a "center for duplication"? This would be nonsense (and Kubie, of course, makes no such assertion). A center for duplication is inconceivable. The stimulation must have acted negatively, throwing a fusion mechanism out of kilter.

The effects of stimulation are not always positive. They may also be negative, an example being the unconsciousness of an epileptic fit. Physicians, like other people, are prone to take for granted things that are commonplace. It is a measure of Hughlings Jackson's insight that he recognized that the unconsciousness of an epileptic fit cannot be dismissed as something too obvious to need explanation, that on the contrary it is a paradox. Since the fit results from too much excitation, why, he asked, isn't the patient, if anything, "*hyperconscious*"? In answer to this question he said that the highest cerebral centers, the "organ of mind," cannot function properly when excitation is unbridled and lawless. The neural substrates of ideas and images are complex, and their function presupposes an orderly and harmonious sequence of excitations properly timed and coordinated. He suggested an analogy. If one might suppose a "locomotor center" in the brain, an epileptic discharge therein would not cause the patient to run fast; on the contrary it would bring locomotion to a halt, for locomotion demands a harmonious pattern of excitation in proper time and sequence.

There comes to mind the analogy of a legislative assembly, that does its work by means of orderly parliamentary procedure and decorum. The members speak one at a time. If everyone talked and shouted all at once the result would be, not quicker action, but paralysis of action.

And so in Kubie's case the stimulation must have acted negatively, interfering with the action of a fusion mechanism.

Fusion is involved also in the cases of Weinstein, Kahn and Sugarman already cited. If a man has a sister named Margaret and nicknamed Maggie, he normally would

¹ From the department of neurology and neurosurgery, New York Medical College, Flower and Fifth Avenue Hospitals, New York City.

² Address: 350 Central Park West, New York 25, N. Y.

know that "sister Margaret" and "sister Maggie" are one. In these two cases the relevant fusion mechanism was paralyzed by disease.

Normally one can tell whether an incongruity is real or only illusory. John Smith is a son, and also a father, but only a sick man would say this is incongruous and there must be two John Smiths.

Thus faulty thinking can come from an insufficiency of fusion. It can also come from *too much* fusion. Some patients fuse concepts that should be kept separate. They fail to differentiate. They may fail to differentiate symbol and object. Thus a schizophrenic woman in a mental hospital, speaking of a movie actor whom she admired, said, "He was smiling at me." Inquiry showed she had been sitting in the day room opposite someone who was holding up and reading a movie magazine whose cover bore a picture of the smiling actor. She failed to differentiate the man from his symbol, the picture. Children pass through such a stage. Seeing a picture of a toy in a book, they will try to lift the toy out of the page. Patients who fail to differentiate symbol and object, abstract and concrete, shadow and substance, figurative and literal, etc., show a loss of the "capacity to split" (2, 3).

Hamlet understood all this. He took pains to assure his listeners that he knew a hawk from a handsaw (*handsaw*: a corruption of "heronshaw" or heron).

Adaptation requires two things. We must differentiate, or "split," things that are separate though they look alike. We must also fuse things that are one though they look different; we must recognize that sister Margaret and sister Maggie are one. To paraphrase the Preacher in *Ecclesiastes*, there is a time to split and a time to fuse.

We turn now to a more complex instance of duplication, exemplified by the patient who said there are two Mt. Sinai Hospitals, one in Manhattan (correct) and the other near her home in another borough, the Bronx. This is more complex than the Margaret-Maggie duplication. In the latter instance the patient did not invent anything: sister Margaret and sister Maggie were realities and she erred only in failing to recognize their unity. By contrast, in the former the

patient invented something that does not exist, for there is no Mt. Sinai Hospital in the Bronx.

The key to this duplication of the Mt. Sinai Hospital lies, I submit, in the association of ideas. No concept can be fully understood in terms of its literal definition. The term "Mt. Sinai Hospital" can be defined in just a few words, but its meanings and implications to a sick man would fill a volume. There is almost no limit to the associations that surround even the simplest of concepts, let alone such affect-laden concepts as mother, father, wife, child, home, and hospital. The hospital, which people dread, is yet a refuge, a place which offers relief from pain, and so is associated with home, mother, and similar concepts. This association finds its ultimate expression in the delirious patient who mistakes the hospital for his home (though I do not mean to say that this is the explanation of the misidentification). Perhaps the invention of a Mt. Sinai Hospital in the Bronx is an intermediate step in this direction. It may be significant that as Weinstein and his associates as well as Paterson and Zangwill (6) and Nathanson, Bergman and Gordon (5) have found, in duplication of place in respect of the hospital, the phantom hospital is usually closer to home than the real one.

It is clear that tumor and other cerebral disease can interfere with the action of fusion mechanisms, causing duplication from failure of fusion of two related images. Fusion is a complex function, as complex as the artistic skill that enables the members of an orchestra to play as one man. Loss of fusion reminds one of a team of horses that operate in unison with the aid of a coordinating mechanism consisting of shaft, reins and halters, without which they would act as two.

The question arises: Why only duplication? Why don't some patients say there are three Mt. Sinai Hospitals, or four or a dozen? The answer can only be surmised. Perhaps it has to do with the fact that there are two cerebral hemispheres. The substrate of an image is a complex thing which is certainly not localized in a small cerebral area but takes in the greater part of one or both hemispheres. The existence of duplication shows that there is "room" for the simul-

taneous activation of the substrates of two related images—perhaps one substrate primarily if not entirely in each hemisphere. Perhaps the activation of two such substrates keeps enough cerebral tissue “busy” to preclude activation of a third.

BIBLIOGRAPHY

1. Kubie, L. S. *Psychoanal. Quart.*, **22**: 21, 1953.
2. Levin, M. *Am. J. Psychiat.*, **94**: 877, 1938.
3. ———. *J. Nerv. Ment. Dis.*, **119**: 61, 1954.
4. ———. *J. Ment. Sci.*, **102**: 619, July 1956.
5. Nathanson, M., Bergman, P. S., and Gordon, G. G. *A.M.A. Arch. Neurol. & Psychiat.*, **68**: 380, 1952.
6. Paterson, A., and Zangwill, O. L. *Brain*, **67**: 54, 1944.
7. Weinstein, E. A., Kahn, R. L., and Sugarman, L. A. *A.M.A. Arch. Neurol. & Psychiat.*, **67**: 808, 1952.

NARCOTIC BONDAGE¹

A GENERAL THEORY OF THE DEPENDENCE ON NARCOTIC DRUGS

SANDOR RADO, M.D.²

The large number of narcotic drugs that can throw the patient into narcotic bondage produce a correspondingly sizeable variety of clinical pictures, each with certain fundamental characteristics common to them all. As the severity of the disorder increases, the conspicuous differences traceable to the chemical individuality of each drug tend to recede, and the clinical picture comes to be uniformly dominated by the same essential pathology. This fact suggests that we need first a general theory of narcotic bondage, that will in turn lead to the construction of a special theory for each drug or group of drugs. After a preparatory study in 1926 (1a), in 1933 (1b) I attempted to evolve a general theory of the dependence on narcotic drugs, using Freud's libido theory as my conceptual framework. This paper proposes to re-examine the subject in the light of added experience and from the point of view of adaptational psychodynamics (2).

Under this revised system of psychoanalytic thought, dependence on narcotic drugs is regarded as a malignant form of miscarried repair artificially induced by the patient himself. Since our chief investigative concern is motivation, let us first find out what the patient believes the drug does for him. If we can win his trust and confidence, he gives us the following invaluable information: "it puts an end to my despair; it makes me feel happy; it restores my self-confidence; and, it does all this in a moment, without any effort on my part. The drug is a miracle. I cannot live without it."

We often find that at the time the patient first took the drug, he was in a state of depression. Suffering from a prolonged illness or from reverses in life, he felt he was unable to make a go of it. He blamed himself and

others, sometimes even the one he loved most; embittered, he desperately longed for miraculous help. This prodromal depression is a precipitating etiological factor, because it sensitizes the patient to the psychodynamic action of the narcotic drug.

By removing pain, relaxing inhibitory tensions, inducing pleasure and facilitating performance, narcotic drugs produce a narcotic pleasure-effect. Conversely, every drug which produces this effect must be classified as narcotic. The average patient, upon therapeutic administration of the drug, responds to its pleasure-effect with a sense of relief and satisfaction. But the patient who is about to develop drug dependence behaves differently, presumably because he has a special predisposition which may be twofold, biochemical as well as psychodynamic. In any case, he has a long previous history showing marked intolerance and fear of pain, and strong though often overcompensated dependency needs indicative of a lack of emotional maturity and security. Sensitized by his depression, he sees in the narcotic pleasure-effect fulfillment of his longing for miraculous help, and responds to it with a sense of personal triumph, a surge of overconfidence: he gets drunk with success. We call this exalted reaction narcotic intoxication or narcotic elation. It is of utmost importance to realize that narcotic intoxication is not limited to alcohol, but is equally characteristic of all narcotic drugs whose misuse society condemns, thereby forcing the patient to hide his elation—as much as possible even from himself.

Scrutinizing the patient's history, one sees that frequently a single experience with narcotic elation suffices to set up in him a narcotic craving of extraordinary and ever growing strength. To explain this remarkable reaction, we must penetrate into the deepest and oldest strata of the mind formed during the early stages of ontogenetic development.

The young organism's first image of itself

¹ Read before the 47th annual meeting of the American Psychopathological Association, February 22-23, 1957, New York City. The topic of this annual meeting was: "Problems of Addiction and Habituation," its proceedings will be published in fall by Grune & Stratton, Inc., New York.

² Address: 50 East 78th St., New York 21, N. Y.

is of proprioceptive (kinesthetic) origin. Enchanted by its ability to move, it attributes unlimited power to its intentional actions and pictures itself as an omnipotent being. This self-image constitutes the representation of the total organism at psychodynamic levels and presides over the integration of its behavior: we call it the primordial self. From this vantage ground the infant views his parents, upon whose ministrations he depends for his survival, as deputies who exercise his magic powers for him.

The grown organism lives under a more or less realistic system of self-government presided over by an adjusted though lovingly retouched self-image called the tested self. This image derives from and inherits the organizing functions of the primordial self, which now has become the hidden core of the organism's desired self, the secret aim-image of its most deeply repressed aspirations.

If in the adaptive struggle for existence self-government fails, the organism may seek to strengthen its tested self with regressed features of its primordial self. However, such repair work is bound to miscarry, since the resulting aggrandized self-image can only undermine realistic self-government.

This also applies to the intoxicated patient. The sudden change from pain to pleasure, from inhibition to facilitation has proved to him by the full weight of an actual experience that, after all, he is the omnipotent giant he had always fundamentally thought he was. One may be tempted to view the patient's grandiose picture of himself as a harmless illusion bound to collapse as soon as the wave of elation subsides. However, closer examination of the clinical facts leads to a different conclusion.

Narcotic elation is followed by sleep and in turn by the morning after. The patient's depression returns deepened by fresh guilty fears and made more painful by the contrast. Yesterday he was a giant to whom responsibilities looked small; today he is small and his responsibilities loom in gigantic dimensions. His situation is worse than before; he feels he must recapture yesterday's grandeur by taking another dose. Thus his craving for elation develops. Augmented by com-

comitant physiological changes, it builds up in him ever-increasing tensions which can be discharged only by means of a fresh elation. Henceforth, every phase of elation leads to a phase of narcotic craving for elation, thence to taking the drug, which brings forth another phase of elation, and so forth in a cyclic course. A narcotic system of self-government, founded on dependence on the intoxicating drug, is established.

The interdependent phenomena of elation and craving for elation show that the patient's grandiose idea operates with delusional strength. This interpretation is further corroborated by the patient's subsequent behavior: he ignores the difficulties and hardships to which he will soon be exposed. To begin with, failure of the pleasure-effect forces him to combat his rising physiological tolerance to the drug by increasing the dose to quantities which he may find hard to obtain. He may be visited by illness after illness resulting from the drug's toxic side-effects. The intoxicating pleasure-effect of the drug diminishes his appetite for food and often destroys his capacity for standard sexual union. His relatives and friends implore him to stop and save himself from certain ruin. While aware of these facts, he nonetheless insists on taking the drug. In an unguarded moment he gives away his secret: "Nothing can happen to me." Though his powers of reasoning and judgment appear to be otherwise unimpaired, he believes unshakably in his personal invulnerability and immortality. The patient's image of himself as an omnipotent and indestructible giant must be clinically described as a thinly veiled narcotic delusion of grandeur rooted in the drug which has produced the intoxicating pleasure-effect for him.

Paradoxically, even conscience tightens the patient's grip on his drug. His guilty fears and self-reproaches, strengthened by his defeated rages turned against himself, elicit automatic acts of expiatory self-punishment. To placate his conscience, his unconscious mind thus drives him to self-destruction by means of the drug (3). His conscious mind does not object because it believes that nothing can happen to him. Under the sway of its primordial self, the organism can unconsciously behold its own march to death.

So far, we have traced the development of narcotic bondage through presumed predisposition, sensitization, narcotic pleasure-effect, intoxication, craving for elation, delusion, and failure of conscience, deriving this pathology from clinical observations; to complete our theory, we shall now examine the relation of this pathology to the organism's hedonic organization.

In adaptational psychodynamics we view the organism as a biological system operating under hedonic control(4). From the evolutionary point of view, hedonic self-regulation must be considered as a very early and fundamental feature of animal organization, perpetuated, like sexual reproduction, throughout the course of phylogenetic history. The pattern of hedonic self-regulation is already foreshadowed in the protozoa: the organism moves towards the source of pleasure and away from the cause of pain. It relies on the expectation that pleasure signals the presence of needed supplies or of conditions otherwise favorable to its survival; and pain the presence of a threat to its organic integrity. Hedonic self-regulation worked because primitive species survived and evolved into higher ones; where it failed the organism (species) died. In our species, it is firmly established at the hedonic level which is fundamental to all levels of psychodynamic integration.

Hedonic control extends over the entire life process as evidenced by the following elementary facts about the human organism: 1. its emergency control is based on the effective use of pain as a warning signal of damage(5); 2. in its pursuit of prosperity, effort and performance are spurred by the pains of deprivation, and are directed, facilitated and rewarded by a variety of pleasures; at the physiological level, the search for and the intake of food are accompanied by pleasures climaxing in satiation called alimentary orgasm(6); at the cultural level, activities toward cultural self-realization are greatly eased by the joys of performance culminating in the self-satisfaction of pride; 3. its primary incentive for reproduction is sexual orgasm attendant upon insemination, the act of integration which renders evolutionary sex differentiation biologically effective(7); 4. its conscience and conduct are shaped by an educational system based on

reward and punishment, that is, on bestowing pleasure and inflicting pain(8).

Hedonic self-regulation advances from a biological to a cultural stage of development. In the infant, its design is still much the same as in subhuman species; however, during the period of growth and maturation this innate design undergoes highly significant cultural adaptations reflecting the cumulative influence of intelligence and learning, education and experience. In the last analysis, these cultural modifications of hedonic control are traceable to the increasing power of foresight which forces the organism to accept *delayed* reward in lieu of *immediate* reward. The extent to which such enlightened hedonic responses supplant the purely biological ones, is a measure of the adult's fitness for cultural cooperation.

The "magic" of narcotic drugs lies in their direct biochemical action on the brain, in their by-passing the prerequisite adaptive effort and performance; through this short-cut they surpass nature's ordinary rewards, and, whenever desired, lift the organism from pain to a pleasure intensified still further by the contrast. As a sort of super-pleasure, the drug's effect makes an irresistible appeal to the organism's hedonic control, displacing more and more the ordinary pursuits and rewards of healthy life. As we have seen, this substitution involves three mechanisms: one of super-pleasure, silencing the warning signals of danger; another of intoxication, ushering in a delusion which, uprooting the patient's reason, foresight and judgment, sanctions his craving; and a third, of conscience, paradoxically promoting the patient's narcotic self-destruction. And yet, viewed in the context of hedonic control, it is only a supporting part that these mechanisms play. The essential factor in the pathology of narcotic bondage is corruption of the organism's hedonic control by the super-pleasure of narcotic drugs. By wiping out the adult's enlightened hedonic responses, the absolute priority of super-pleasure reduces self-regulation to the precultural hedonic responses of the infant, aimed at immediate reward. In other words, corrupted hedonic self-regulation inevitably dehumanizes the patient's behavior: it is on this ground that we consider narcotic bondage a malignant disorder.

By tracing this delusional disorder to its biological roots, we have carried its psychodynamic analysis to the threshold of physiological correlations. During the last year or two, physiological experiments on animals have led to the discovery of "pleasure centers" in the brain, unexpectedly confirming our own hedonic theory. Electric stimulation of these centers gives the animal a unique pleasure reward strikingly similar to the super-pleasure induced biochemically by narcotic drugs.

Let me quote from a 1956 paper by James Olds (9). Using the Skinner method, animals with implanted electrodes were put into a "do it yourself" situation, where, by pressing a lever, they could stimulate their own brain. Dr. Olds says:

The animals seemed to experience the strongest reward or pleasure from stimulation of areas of the hypothalamus and certain mid-brain nuclei—regions which Hess and others had found to be centers for control of digestive, sexual, excretory and similar processes. Animals with electrodes in these areas would stimulate themselves from 500 to 5,000 times per hour.

Electric stimulation in some of these regions actually appeared to be far more rewarding to the animals than an ordinary satisfier such as food. . . . Indeed a hungry animal often ignored available food in favor of the pleasure of stimulating itself electrically. Some rats with electrodes in these places stimulated their brains more than 2,000 times per hour for 24 consecutive hours.

Experimental animals may become even more dependent on the super-pleasure of electric stimulation than do human beings on the super-pleasure of narcotic drugs. Whether or not animals also develop an analogous delusion for the exclusion of their natural life interests is an unanswerable question. But we do know that in the human organism, equipped with a vastly more complex brain, surrender to a corrupted hedonic self-regulation is brought about by the compelling means of a delusion.

In juxtaposition to James Olds' report, I would like to quote a few brief passages from 2 earlier papers of mine. The first was published in 1926(10):

When a person adopts the practice of pharmacotoxic gratification, momentous consequences ensue to his whole psychic and somatic condition. The phenomena presented to the clinical observer in cases of morbid craving are so multitudinous that in this brief survey we must confine ourselves to

stressing certain fundamental characteristics. The changes are enacted principally, of course, in the abode of the libido, for erotic gratification by means of drugs is a violent attack on our biological sexual organization, a bold forward movement of our "alloplastic" civilization. Let us confine ourselves to morphinism and to the most "fashionable" method of administering the poison by means of the Pravaz syringe. To put the matter in a nutshell, the whole peripheral sexual apparatus is left on one side as in a "short circuit" and the exciting stimuli are enabled to operate directly on the central organ. I propose to term this phenomenon, which deserves to be distinguished by a special name, "metaerotism." With the advance of organic chemistry the manufacture of the most refined substances for producing sexual gratification is assuredly only a matter of time, and it is easy to prophesy that in the future of our race this mode of gratification will play a part as yet uncalculable.

In 1933 I wrote(11):

What is immediately evident is the fact that the pharmacogenic attainment of pleasure initiates an artificial sexual organization. . . . The pharmacogenic pleasure instigates a rich fantasy life; this feature seems especially characteristic of opium-pharmacothymia. . . . The crux of the matter is, that it is the pharmacogenic pleasure-effect which discharges the libidinal tension associated with these fantasies. . . . The genital apparatus with its extensive auxiliary ramifications in the erotogenic zones falls into desuetude and is overtaken by a sort of mental atrophy of disuse. The fire of life is gradually extinguished at that point where it should glow most intensely according to nature and is kindled at a site contrary to nature.

We must remember that in the libido theory such terms as "libido," "sexual" and "erotic" were (and still are) used in a "wider sense" denoting desire for and love of pleasure, which might be non-sexual as well as sexual(12). Accordingly, "sexual organization" meant "pleasure organization," "peripheral sexual apparatus" meant "peripheral pleasure apparatus," etc. The appropriate name for the phenomenon I called "metaerotism" is "metahedonism." The point is that these early formulations firmly established the intoxicating pleasure-effect as the key to the psychodynamic action of narcotic drugs and, in the long view, as a threat to the future of our species.

Generally speaking, the prognosis of narcotic dependence is unfavorable, and the problem of rehabilitation extremely difficult. The crux of the matter is that the patient does not suffer from his illness; he enjoys it. Even if we succeed in influencing him

for a short time, we cannot expect his sustained cooperation. This attitude, consistent with his pathology, determines the plan for rehabilitation. The first task is to win the patient's consent and withdraw the drug, preferably in a specially equipped hospital and with psychotherapeutic support. Afterwards the patient should go on with psychotherapy, if possible while remaining in the hospital until the potential dangers of violence, suicide and relapse are sufficiently reduced. Without entering into the technical details of this delicate procedure, I wish to stress that its most effective component is the release of the patient's defiant rages and embittered resentments, restoring his self-respect and human dignity.

Aside from such protective measures, at this stage the decisive problem is the underlying disorder which first prompted the patient to cast his lot with the drug and which now will cause him to feel tempted again and again. We may divide our patients into three groups. In the first, drug dependence was precipitated by a so-called psychoneurosis or, in our terms, an "overreactive" or "moodcyclic" disorder; in the second, by a schizophrenic process; in the third, by the impatient agitations of a frustrated psychopath (the "extractive type" of our classification).

Of these three groups, we can make recommendations only concerning the first. Here the preferred method is reconstructive psychoanalytic therapy. The outcome depends upon the patient's inner resources and his life circumstances.

The belief that withdrawal of the drug alone suffices to free the patient from his bondage has unfortunately no foundation in fact. While it is difficult to gather dependable statistics, the available information indicates that the majority of the patients relapse within a few months and the remainder within a few years.

May I say a word about the future as I see it? Though the essential prerequisite for rehabilitation, withdrawal of the drug is a precarious procedure. The ideal solution would immunize the patient against the intoxicating pleasure effect of narcotic drugs. The last few years have brought us the beginning of a physiology of pleasure; we may

now look forward to a physiology of the narcotic pleasure-effect. By viewing the narcotic super-pleasure as a developmental derivative of alimentary orgasm, psychodynamics may even offer a clue to the search for its biochemical mechanism (13). I believe it possible that eventually biochemists will discover a method for the immunization of the organism against the narcotic pleasure-effect. Even if this hope materializes, shutting off escape into drug dependence, the patient will still be left with the problem of his underlying disorder.

Let me sum up. To achieve clarity, in our general theory we have separated the pathology of drug dependence from the pathology of the underlying disorder, applying to both the insights of adaptational psychodynamics. In this light, drug dependence is seen to be a self-inflicted process of miscarried repair; it transforms realistic self-government into narcotic self-government. Utilizing our previously suggested concepts of narcotic pleasure-effect, narcotic elation and narcotic craving for elation, we have shown that both elation and craving for elation are interdependent manifestations of a thinly veiled narcotic delusion of grandeur elicited by and rooted in the intoxicating pleasure-effect of the drug. This chain of pathological events was then traced to corruption of the organism's hedonic self-regulation by the effortless and instantaneous super-pleasure of narcotic drugs. Trapped by the subversive super-pleasure, the patient abandons his enlightened hedonic responses based on delayed reward, and reverts to the precultural responses of the infant, aimed at immediate reward. It is this dehumanizing consequence of a corrupted hedonic control that makes drug dependence a malignant disorder. Our hedonic theory of this disorder first outlined in 1926 and 1933 now finds striking corroboration in the animal experiments of James Olds concerned with the demonstration of "pleasure centers" in the brain.

From this malignant pathology we deduced the plan for rehabilitation: withdrawal of the drug; supportive and reconstructive psychotherapy whose goal is control of the potential dangers of violence, suicide and relapse, and, whenever feasible, eradication of the underlying disorder. Finally, we called

attention to the need for further advances in the physiology of pleasure, which may well open the door to the patient's expected biochemical immunization against the intoxicating pleasure-effect of narcotic drugs.

BIBLIOGRAPHY

1a. Rado, Sandor. *Internat. J. Psycho-Analysis*, 7, 1926. Now in the author's *Psychoanalysis of Behavior: Collected Papers*. New York: Grune & Stratton, 1956.

1b. ———. *Psychoanal. Quart.*, 2, 1933. Now in the author's *Coll. Papers*, see reference 1a.

2. Rado, S. *Adaptational Psychodynamics: A Basic Science*. Pub. in: *Changing Concepts of Psychoanalytic Medicine*, Rado, S. and Daniels, G. E., eds., New York: Grune and Stratton, 1956. Now in the author's *Coll. Papers*, see reference 1a.

3. ———. *Emergency Behavior: With an Introduction to the Dynamics of Conscience*. Anxiety,

Hoch and Zubin eds. New York: Grune & Stratton, 1950. Revised 1955. Now in the author's *Coll. Papers*, see reference 1a.

4. ———. *Hedonic Control, Action-Self, and the Depressive Spell*. Depression, Hoch & Zubin eds. New York: Grune & Stratton, 1954. Now in the author's *Coll. Papers*, see reference 1a.

5. ———. See reference 3.

6. ———. See reference 1a.

7. ———. *J. Nerv & Ment. Dis.*, 121, 1955. Now in the author's *Coll. Papers*, see reference 1a.

8. ———. See reference 3.

9. Olds, James. *Scient. Amer.* 195, 1956.

10. Rado, Sandor. see reference 1a.

11. ———. See reference 1b.

12. ———. *An Adaptational View of Sexual Behavior*. *Psychosexual Development in Health and Disease*, Hoch and Zubin eds. New York: Grune & Stratton, 1949. Revised 1955. Now in the author's *Coll. Papers*, see reference 1a.

13. ———. See reference 1a.

DETECTION OF CHLORPROMAZINE IN BODY FLUIDS

D. J. CAVANAUGH, PH. D.,¹ AND FRANK R. ERVIN, M. D.²

The oxidation of chlorpromazine or its metabolites in strong acids serves as the basis for both quantitative(1) and qualitative(2) analytical methods. Color development in a sulfuric acid medium may be promoted by the ferric ion(2).

The rapid development of color in sulfuric acid is attended by the disadvantages that 1. the color is unstable, 2. naturally occurring chromogens may give considerable interfering color, 3. the ferric ion is highly colored, and 4. the reaction is limited to use with protein-free solutions. These difficulties may be avoided by using concentrated (85%) phosphoric acid as the solvent. The color developed in H_3PO_4 is relatively stable, natural chromogens are less highly colored, the ferric ion is present as a colorless complex, and all proteins tested give optically clear solutions with no tendency toward turbidity.

In H_3PO_4 chlorpromazine itself forms a red product having an absorption maximum at about 530 $m\mu$. Chlorpromazine sulfoxide yields a violet product which has an absorption maximum with its midpoint at 540 $m\mu$. Spectrophotometric examination of the urinary forms of the drug indicates that the predominant metabolite is the sulfoxide. This is in agreement with the reported metabolic disposition on the drug(3) and qualitative tests on urine should be run in comparison with the sulfoxide rather than pure chlorpromazine. Urine from patients receiving doses of the order of 200 mg. or more per day usually develops a strong violet to purple color in phosphoric acid alone and addition of ferric chloride is unnecessary.

When the ferric ion is used to accelerate color development one must exercise caution. The ferric ion has a well known tendency to form complexes with phenolic compounds and it is particularly reactive as a complex-forming ion with respect to salicylic acid and some of its derivatives. The validity of tests for chlorpromazine is dependent upon the

elimination of various drugs as sources of interference. Notable among these is aspirin. Urinary derivatives of acetylsalicylic acid may include free salicylic acid as well as certain conjugated products of varying susceptibility to acid hydrolysis(4).

The procedure adopted in this laboratory is as follows: urine is mixed with 85% H_3PO_4 in the ratio 1:4. Within an hour color development is noted if the sample collection is made within 8-12 hours of the drug administration. When very small doses (of the order of 25 mg.) are given the color is feeble and considerable care must be taken to avoid confusion with color arising from natural chromogens. In such cases ferric chloride may be added to promote color development. Usually 0.1 ml of 1M ferric chloride to 5 ml of the test mixture is adequate. This test may be applied to cerebrospinal fluid or serum without interference due to turbidity. In the latter case the authors were unable to detect more than traces of chlorpromazine within 30 minutes of the i.v. injection of as much as 200 mg. of the drug. No positive test on cerebrospinal fluid has yet been obtained. Direct sunlight should be avoided in performing this test. Color development may not be complete for several hours when drug concentrations are low and it is advisable to re-examine the test solutions four or five hours after mixing the acid and urine. There appears to be no interference by reserpine. Reducing agents bleach the solutions, particularly when the ratio of water: acid is too high. The ferrous ion is very effective in this respect and photoreduction of the ferric complex undoubtedly hastens bleaching when the ferric chloride-containing solution is exposed to strong light.

BIBLIOGRAPHY

1. Kok, K. *Acta Physiol. Pharmacol. Neerl.*, 4: 388, 1955.
2. Forrest, F. M., and Forrest, Irene S. *Am. J. Psychiat.*, 113: 931, 1957.
3. Salzman, N. P., and Brodie, B. B. *J. Pharmacol. Exptl. Therap.*, 118: 46, 1956.
4. Williams, R. T. *Detoxication Mechanisms*. New York: John Wiley & Sons, Inc., 1949.

¹ Biochemist, Southeast Louisiana Hospital, Mandeville, La.

² Psychiatrist, Southeast Louisiana Hospital, Mandeville, La.

CEREBROSPINAL FLUID NEURAMINIC ACID DEFICIENCY IN SCHIZOPHRENIA

A PRELIMINARY REPORT

SAMUEL BOGOCH, M. D., PH. D.¹

The neuraminic acid content of cerebrospinal fluid² was determined in individual specimens obtained in random diagnostic lumbar punctures performed on 90 general hospital patients, both children and adults, and 30 mental hospital patients, none of whose diagnosis was known. When the records were later consulted, 17 of the mental hospital patients were found to have the clinical diagnosis of schizophrenia. The mean content of the schizophrenic patients was found to be lower than that of non-schizophrenic mental hospital patients, and even lower than that of children under 7, whose mean value was much below that of the adult.

	Age in years	Number of patients	Neuraminic acid, in microgram/cc. C.S.F.	
			Median	Mean
Schizophrenic patients	20-62	17	37.5	36.6
General hospital children	0.2-6	54	41.0	42.7
General hospital children	7-16	26	46.0	46.2
Non-schizophrenic mental hospital patients	16-61	13	50.0	53.0
General hospital adults	27-57	10	56.0	61.5

Only 2 of the 17 patients diagnosed as schizophrenic had values above 40 (43 and 49). Only 4 of the 49 'non-schizophrenic' patients over the age of 7 had values below 40 microgram per cc. (37.0 in each case), but the examination of the clinical records of these 4 revealed that one was a 23-year-old male diagnosed as "obsessive-compulsive" who had had 3 mental hospital admissions; the second was a 13-year-old girl whose condition was diagnosed in a general hospital as 'conversion hysteria' because of 3 attacks of

a negativistic coma-like state; the third was a 40-year-old severe 'psychoneurotic' who had been under psychiatric care for many years; and the fourth was a 12-year-old boy with no history of mental disorder.

While the number of patients studied does not permit any conclusion regarding the diagnostic value of this determination, the results to date would appear to indicate an important new area for further investigation. Thus, the tendency for the concentration of neuraminic acid to increase with age suggests a relationship to maturation. Low values in certain adult schizophrenic patients, comparable only to those found in some children under 7, might indicate a form of chemical immaturity.

Recent studies in this laboratory(1-3) have led to the development of the hypothesis(4) that the neuraminic acid-containing substances of both brain and cerebrospinal fluid, i.e. gangliosides, glycoproteins, and other conjugates, are involved in a "Barrier-Antibody System," which is concerned with the isolation of the brain from substances which pass readily from the blood to other tissues. This term includes, in addition to the classical notion of a fixed blood-brain barrier, an immunochemical concept of a circulating cerebrospinal fluid component. The Barrier-Antibody System may be inadequately developed in the schizophrenic.

Micromethods which have been developed for the quantitative analysis of individual specimens of cerebrospinal fluid with regard to the distribution of neuraminic acid between small and large molecular weight components, are described in the detailed report of this work(4).

BIBLIOGRAPHY

- 1 Bogoch, S. J. Am. Chem. Soc., June, 1957.
- 2 Bogoch, S. Studies on the Structure of Brain Ganglioside, in press.
- 3 Bogoch, S. Isolation of Viral Hemagglutinating by Brain Ganglioside, in press.
- 4 Bogoch, S. Cerebrospinal Fluid Neuraminic Acid Deficiency in Schizophrenia. The Concept of a Barrier Antibody System, in preparation.

¹ Neurochemical Research Laboratory, Massachusetts Mental Health Center (Boston Psychopathic Hospital), and Department of Psychiatry, Harvard Medical School, Boston, Mass.

² Determined by a modification of the method of Klenk and Langerbeins, Z. physiol. Chem., 270, 185, 1941. Crystalline neuraminic acid obtained from bovine brain ganglioside was employed as the standard(2, 4).

POSSIBLE SYNERGISTIC ACTION OF CHLORPROMAZINE, RESERPINE AND FRENQUEL. A PRELIMINARY REPORT

J. WILLIAM SILVERBERG, M.D., AND ALEXANDER GRALNICK, M.D.¹

With the addition of an increasing number of ataraxics to our armamentarium there are numerous clinical reports as to their effectiveness, special uses, dosages and toxic side-effects in the literature. A number of workers have reported their experiences with a combination of chlorpromazine and reserpine. We have recently begun using a combination of chlorpromazine, reserpine and frenquel. The results have been sufficiently interesting to warrant a preliminary report to bring them to the attention of the profession in hopes that other workers will try and report on the effect of the combination.

The work reported was done at High Point Hospital, a private mental hospital, where intensive psychotherapy is the cornerstone of the therapeutic program. It has been our experience, as has been reported by many others, that the ataraxics, particularly Thorazine and Serpasil, are of great help in bringing psychotic patients into meaningful psychotherapeutic relationship. Our experience with Frenquel, used in a similar way, has on the whole been discouraging. A combination of the three drugs has given surprising results. Most of these patients were highly recalcitrant to treatment and some had been treated with chlorpromazine, reserpine and Frenquel separately without significant effect.

CASE REPORTS

1. A 40-year-old, married schizophrenic woman had her first psychotic break 10 years ago and this her fourth hospitalization, occurred after a year's gradual downhill course on intensive (three times a

week) ambulatory supportive psychotherapy. Shortly after admission she became confused and suspicious on her ward, and almost totally uncommunicative in psychotherapy. She was treated with chlorpromazine 100 mg. t.i.d. and reserpine 3 mg. t.i.d. for 3 weeks without apparent effect, and then Frenquel 40 mg. t.i.d. was added to these medications. Within a few days there was definitely more responsiveness towards personnel, and in psychotherapy she began to express her paranoid delusions. After 2 weeks she had begun to drop her delusions and these have not occurred. She has been able to work actively in psychotherapy.

2. An 18-year-old paranoid schizophrenic girl had received extensive ECT and insulin treatment before hospitalization at High Point. During her 8 months in hospital she had shown little response to psychotherapy, nor had ECT or Thorazine, used individually, affected her favorably. She was placed on chlorpromazine 100 mg. q.i.d., reserpine 2 mg. q.i.d., and Frenquel 40 mg. q.i.d. and within 4 days began to relate her paranoid delusions to her therapist. Two weeks later she dropped these ideas as "silly and sick" and has not resumed them. Although previously she had resisted taking medication, she now takes it willingly. After about 5 weeks on the 3 ataraxics, she began to show signs of slipping back to her former condition. The medications were stopped and her condition deteriorated. When 2 weeks later the medications were resumed she repeated the good response she had shown before.

Although the total number of patients treated thus far is still small, we feel that the fact that several patients, who have been in a chronic, highly static state for months, have shown significant improvement warrants this preliminary report. Although we have varied the total amount of medication given in various cases, i.e. chlorpromazine 200 mg., reserpine 2.0 mg., Frenquel 20 mg. daily, to chlorpromazine 400 mg., reserpine 4 mg. and Frenquel 160 mg. daily, the approximate proportions have been maintained constant.

¹ High Point Hospital, Port Chester, N. Y.

PERPHENAZINE—A DRUG MODIFYING CONSCIOUSNESS

N. L. MASON-BROWNE, M.A., M.B.¹

Since it is increasingly necessary that satisfactory evidence of the efficacy of drugs be

¹ Crease Clinic of Psychological Medicine, Esson-dale, B. C.

available before those drugs are prescribed, a preliminary study of one of the newer agents has been carried out. This paper represents a brief report of this study, the re-

sults of which will be published later in greater detail. The drug, perphenazine (Trilafon),² is an amino-derivative of chlorphenothiazine and may be assumed to act upon the alerting system of the brain stem. Animal experiment demonstrates that its potency is 5 to 10 times that of chlorpromazine.

A total of 75 chronic patients (36 men, 39 women) was used. All displayed anxiety, over-activity or were problems in nursing management. The author personally tested all the patients, who were divided into three equal groups and were retained in their usual setting. The double blind technique was employed. One group was given perphenazine 16 mg. t.i.d. by mouth, a second group of 25 received 25 mg. chlorpromazine t.i.d., and the last group had 25 mg. placebo t.i.d. All three tablets were exactly the same in shape, size, and colour, although not in effect, and were given over a 30 day period. Urinary, blood, and liver function tests were carried out before and after the trial. Nursing records of blood pressure, pulse, respiration, nausea, restlessness, anxiety, alertness, confusion, and appearance of insomnia were kept daily. A quantitative evaluation of behaviour (acute anxiety cluster of the Wittenborn Rating Scale) was used to rate patients before and after the trial. On these occasions each patient was also submitted to a battery of tests chosen as measures of attention, concentration, memory, learning, and basic perceptual and motor function. Tests used were the Tapping, Dotting, Digit Symbol, Digits Forwards and Backwards, and Porteus Maze.

² Trilafon is the trade name of Schering Corporation Ltd. for perphenazine.

Side-effects occurred in 7 of the patients receiving perphenazine and in no others. These took the form of Parkinsonian signs and increased secretions. Hypotension and altered liver functions and allergic side-effects were not found.

Patients receiving perphenazine showed greater improvement in the tests which measured integrative function below the cortical level, and yet above the multi-neuronal reflex level. Tapping and dotting showed the only statistically significant variation in performance. The source of variation was significant for perphenazine but not for chlorpromazine. Insofar as the other tests which we assume measure higher-order function did not show significant differences, it may be postulated that the site of action of the drug is at the subcortical level.

Maze results were not statistically significant, but showed a decrement of performance similar to that following psychosurgery. The Rating Scale for anxiety also showed a statistically significant variation for perphenazine but not chlorpromazine.

Rating testing and clinical assessment showed perphenazine to be similar in action to chlorpromazine, but with greater efficacy and more favourable therapeutic ratio. Un-toward side-effects occur with its use, but may be avoidable with smaller doses, and are easily controlled.

The term "tranquilizer" is a misnomer and also has numerous unfortunate implications for lay persons. Since these drugs affect crude or basic consciousness and awareness, the term "sciotic" drug is suggested as an alternative.

RESEARCH NOTES

INVESTIGATION OF THE OEDIPUS PHANTASY BY HYPNOSIS

W. EARL BIDDLE, M.D.¹

The widespread controversy over psychoanalysis is inevitable so long as validation depends upon subjective values, experiences and insights. Psychiatry and medical psychology have been enriched by the contributions of psychoanalysis, but those who insist upon adherence to Freudian orthodoxy tend to discredit the whole movement as unscientific. No entirely objective study is possible within the framework of psychoanalysis itself, but an interdisciplinary approach can be helpful. Hypnotic regression and revivification are valid investigative procedures which provide an objective method of study of human behavior, and are applicable here.

In our study 100 subjects were interviewed at the regressed age level of 3 years, and asked about what they could do by "just thinking" or "magic thinking." These subjects were psychotic (in partial remission), psychoneurotic and normal persons. At first we tried to regress the subjects to oral, anal and phallic stages. This proved impracticable as we could not hold the subjects to an age level. Also, we were suggesting phantasy material tailored according to psychoanalytic theory, and were thereby jeopardizing the validity of our results. We then decided to regress the subjects to a fixed age level and ask them about their own phantasies. This report is limited to the Oedipus phantasy.

All subjects phantasized making themselves small and entering into the body of the parents, or making the body of the parents extremely large so that the subject could go in. This phantasized entrance was made through the skin, the eyes, the ears or any

of the body orifices. It is especially noteworthy that the subjects always entered the body of the parent *in toto*. This bodily union was analogous to a spiritual communion between the parent and child, and did not have the implication of a lustful attachment. Expressions made by the subjects, such as, "getting into mother's body" or "taking father to bed" would quite understandably be misunderstood by most therapists as incest wishes. However, in no instance did the subjects express erotic desires for a parent. When questioned about sexual relations the invariable answer was that children did not have such wishes, and that sexual activity was for adults only. Childlike innocence, however, does not imply ignorance. We found a surprisingly accurate knowledge of impregnation and birth at this age level, but some subjects did not retain this knowledge at a later age level.

When feeling frustrated or neglected the subjects responded with intense hostility to either or both parents. This hostility extended far beyond mere death wishes. The frustrating parent was completely annihilated. This appeared to be accomplished by negative hallucinations. The subjects also phantasized the parents making brutal attacks upon one another and battling to mutual extinction. The ability to create was as preposterous as the ability to annihilate. The subjects handled these abilities with a naive self assurance.

It is concluded that the Oedipus phantasy described by Freud is not found regularly, but children of both sexes strive for a shared spiritual union with both parents.

¹ Philadelphia State Hospital, Philadelphia 14, Pa.

CORRESPONDENCE

OSCAR WILDE

Editor, THE AMERICAN JOURNAL OF PSYCHIATRY:

SIR: In a recent issue (April, 1957) of this JOURNAL, C.B.F. reviewed *The Three Trials of Oscar Wilde* edited by H. Montgomery Hyde. I have read this interesting book and find Dr. Farrar's review most informative and apt.

In spite of the unusual publicity and attention given to this famous trial and to the subject of homosexual perversion, it is curious—as C.B.F. points out—"no medical evidence was presented that might have thrown light upon Wilde's inversion and perhaps altered the issue of the trials." Many etiologies for Wilde's perversion have been suggested including (1) an abnormal inheritance from his father who was hyper-heterosexual, (2) an abnormal inheritance from his mother who showed acromegalic changes, (3) an abnormal social identification resulting from his mother's practice of dressing him in female clothes as a child, (4) abnormal psychosexual relations from a dynamic point of view to his mother. Not one of these etiologies withstands critical scrutiny. Regarding his father's hypersexuality, it would be a brave critic indeed who after reading Kinsey's report would categorize his father's behavior as beyond the normal range of male sexual activity. Furthermore, where is the evidence for a general transmission of homosexual behavior? Equally vague is the relationship between the acromegalic physique of his mother and Oscar Wilde's inversion. There is a paucity of data which shows that these two are related. The third etiology is effectively discounted by the editor of the book, H. Montgomery Hyde. The fourth proposition is equally tenuous. It is not difficult to highlight focal points in any personal history which can support any given hypothesis provided that (1) the complete history is known, that is, no prediction is required, and (2) that personality history which favours the hypothesis is considered

a fact and personality findings which counter the hypothesis are considered examples of resistance to the underlying true but unexpected fact.

I would like to present yet another theory regarding the etiology of Wilde's perversion and of his trials. It is simply this—that Wilde's inversion and unusual behavior was triggered by a personality change due to an insidious cerebral syphilitic process. As a result of this pathological change, Wilde's brilliant but unfeeling wit for social situations, which, in the climate of his time operated to his success in his plays, led to his downfall as a result of the trial and conviction.

Wilde was born in 1854. He attended Oxford University between 1874 and 1878 where he contacted syphilis from heterosexual relationships. This was treated with mercury but not successfully. He married in 1884.

Editor Hyde states that "We know too that he was deeply in love with his wife at the time of their marriage, and that they experienced normal sexual intercourse. Indeed, two sons were born of the union before the rift between them took place. At the beginning the husband seems to have been an enthusiastic lover. To a friend whom he chanced to meet during the honeymoon he spontaneously expatiated upon the physical joys of wedlock. And on the occasion of his first separation from his wife, some months later, he wrote to her from Edinburgh: 'Here am I; and you at the Antipodes: () execrable fates that keep our lips from kissing, though our souls are one. . . . The messages of the gods to each other travel not by pen and ink, and indeed your bodily presence here would not make you more real: for I feel your fingers in my hair and your cheek brushing mine. The air is full of the music of your voice, my soul and body seem no longer mine, but mingled in some exquisite ecstasy with yours.'

"Before proposing to his wife, Wilde had consulted a doctor in London, who had assured him that he was completely cured of his youthful malady. On the strength of this assurance he married. About 2 years later he discovered to his dismay that all traces of syphilis had not been eradicated from his system, and it was this unpleasant discovery which obliged him to discontinue physical relations with his wife. In the result, *inter alia*, he turned towards homosexuality."

His first trial occurred in 1895, 17 to 21 years after harboring the treponema pallida. This certainly was long enough for the establishment of a syphilitic process in the brain. He died in 1900, and the doctor who attended him in his last days stated that his patient displayed all the symptoms of a chronic syphilitic.

Wilde's behavior before, during and after the trial was brilliant in his use of repartee but woefully lacking in judgment and he effectively demolished his chance for freedom by (1) not being very honest with his solicitor, (2) by falsifying his age (a matter of public record), (3) by withholding information that might have saved him and then feeling martyred because he had done so, and (4) by continuing his first suit against the Marquess of Queensberry against the advice of his good friends. On page 35, Editor Hyde refers to his "temptation to show off." A dinner is described with Shaw,

Douglas and Harison when he was advised by Shaw and Harison to withdraw his suit and quit the country but he refused. On page 43, "Wilde was urged by his friends on all sides to leave the country," but a perverse and foolish sense of obstinacy and bravado induced him to stay at all costs and see the thing through. Again "this line of thinking was reckless in the extreme."

After the first trial, he was again advised to leave England but he found himself in a pathetic state of indecision lamenting that the train had gone or that it was too late, and then feeling that he had at that time a good chance of being acquitted.

Admittedly, this hypothesis suffers from the same difficulty as the earlier hypotheses, that is the lack of adequate medical and psychological data regarding Oscar Wilde. However, in my opinion, the fact of the syphilitic process and the fact of poor judgment late in his life do suggest the hypothesis that if Oscar Wilde had not had cerebral syphilis—(1) he might not have become homosexual, (2) if he had become homosexual, he might have been more circumspect as regards his behavior, and (3), he would have shown much more judgment at the time of his trial and perhaps have avoided the consequences.

A. HOFFER, M. D.,
Director, Psychiatric Research,
University Hospital,
Saskatoon, Saskatchewan.

PERSONALITY

Everyone now believes that there is in a man an animating, ruling, characteristic essence or spirit, which is himself. The spirit, dull or bright, petty or grand, pure or foul, looks out of the eyes, sounds in the voice, and appears in the manners of each individual. It is what we call personality.

—CHARLES W. ELIOT

PRESIDENT'S PAGE

Through the generosity of the Editorial Board, the President has been given the privilege of a page of the JOURNAL to communicate to his associates some of his ideas, ruminations and activities. One of the first jobs of an incoming president is the appointment of committee members. There are approximately fifty active committees, each made up of six or more members; therefore there are somewhat more than three hundred committee members, of whom about one-third finish their tour of duty after three years. The new president thereupon has the obligation of filling the vacancies. This is a major undertaking, as it is desirable that each committee member be interested, devoted and energetic in pursuing the activities of the committee for the welfare of the Association. Geographical distribution is desirable. It is pleasant to report to the Association membership that there is only one declination to accept the committee appointment. The letters of acceptance evidenced great enthusiasm for the opportunity to serve.

When I became a member of the organization (then called the American Psychopathological Association), the membership numbered approximately 800. At an annual meeting, there was, and is expected attendance of 25 to 30 per cent of the membership. Hence 200 to 300 members assembled. It was easy, therefore, to become acquainted with the majority of one's associates. The number of papers was relatively few, as there were no multiple sections. The annual meeting was an event of social significance where one could become acquainted with the activities and ideas of a large portion of the membership. Good fellowship, a forum for the reading of papers and a discussion of the affairs of the Association took place. The meeting was reported in great

detail in the JOURNAL, including reports of committees and actions taken by the Council at its interval assembly. Today the number of members is approaching 10,000. Indeed, in this past year essentially as many new members were elected as the total membership rolls of this earlier period.

Throughout the history of the Association, the membership has taken very seriously the matter of the mental health of the nation, and through its officers and committees has attempted to effect leadership. In recent years, with the rapid growth of membership, with the increased activities in the field of mental health throughout the countries represented by the APA, the responsibilities and the activities have multiplied. The establishment of an organization headed by a medical director has come into being. The new home is shortly to be occupied. This has brought to the Association if not a new orientation at least the responsibility of deciding where it wishes to go, how much activity it wishes to foster, and how expanding activities can be financed. We are faced with the questions inherent in all large organizations of centralization or decentralization. Personally I am devoted to the theory of decentralization. To my way of thinking, it is fortunate that the Association has apparently taken the steps for decentralization side by side with strengthening the central organization. The creation of the Assembly and District Branches, the development of Divisional and Research meetings, suggest a direction of activities that I believe is very hopeful. It is my hope that the activities of the Assembly of the District Branches will develop more and more and become the effective portions of our organization.

HARRY C. SOLOMON, M.D.

COMMENT

THE UPSURGE OF THE SAVAGE

Not so long ago *The Medical Journal of Australia* published an editorial about social conditions representing different cultural levels as between separate racial stocks, and also about primitive traits that come through to the surface in so-called civilized communities.

This editorial said things that are worth retelling and Dr. Mervyn Archdall, Editor of *The Medical Journal of Australia*, has graciously authorized the quotations that follow.

Residents in the more primitive parts of Australia where aborigines are to be found have frequently described their experiences when endeavoring to train an intelligent native girl and bring her up in the ways of white civilization. Often the girl in "pre-teen age" excels her white school-fellows in quick perception and retentive memory; her sponsors are delighted with her progress and predict for her a future of usefulness. But when she has entered the "teenage" the girl becomes restless, especially if any of her people are camping nearby, and then one day she disappears without a word of farewell. When next seen, if she is seen at all, she is a scarred and verminous savage with pendent breasts nursing a baby. The habits of her white sponsors have been shed as a snake sheds its skin; she is happier in her unkempt condition, and any return to the ways of her former life as a foster child is not only impossible but is not desired. We speak with pity of such a reversion and are apt to regard it as a characteristic of the aboriginal and as something from which we are happily exempt, but let us not be too certain and complacent. Mankind has for so many tens of thousands of years indulged in wild magical rites and orgies of sexual license, with stamping of feet to the rhythm of tom-toms, frenzied dancing of warriors and witch-doctors, with gashing of skin and enforcement of hideous mutilations that even in the best of us there are interwoven in our psychic background the predispositions and

sinister potentialities of the savage. Wordsworth wrote that heaven lies around us in our infancy, an aphorism which a mother of a healthy family of young children is hardly likely to accept as true; but Wordsworth proceeds to deplore the fact that shades of the prison house begin to close about the growing boy. Puberty, especially in the boy, not only witnesses the onset of sexual desire and gratification, but a host of turbulent and often antisocial impulses. It is just at this age when he needs vigilant watching and careful guidance that he is too often pushed out into the world to earn a wage and pick up any contamination offered in his environment. We are horrified at the extent and nature of vandalism; upholstery of railway cars is slashed, young trees, carefully chosen and planted, are uprooted or cut down, sacred memorials are desecrated, devices designed for young people's own protection are wrecked and too often acts of sabotage are committed which in a high degree endanger human life, as when obstructions are placed on railway lines. We are often told that education is an asset which is permanent, it cannot be lost or squandered; but, alas, this is not quite true. . . . Like the civilized behaviour of the aboriginal girl brought up in a white home, it is overwhelmed by the upsurge of the savage innate in the growing boy and girl of all races, and liable to take command of character unless deftly held in check. We should keep this consideration always in mind. We read of rock and roll dances in which young folk are carried away by an hysterical frenzy and behave as if demented; they are merely giving way to elemental forces deeply implanted in human nature. Adults simply cannot understand the screaming adulation of crooners and similar entertainers given by silly girls, but these are only reverting to ancestral usages. . . .

Our daily life displays evidences of magic all around us. The mascot, whether a living animal or an inanimate object, is accepted as something giving a human touch to the ac-

tions of the possessor, but is in fact a piece of pure mumbo-jumbo. Revealing of the future by divination is observable in lucky numbers and in tips for horse-racing given by haphazard occurrences and coincidences. Around each lottery there has grown a huge system of unwarranted optimistic beliefs and hopes which lure the prospective buyer of tickets; the hard facts of mathematical theory of probability do not fit in with aspirations based on magical premises.

The great service of Hippocrates to medical science was the divorce of medicine from the supernatural, but, alas, that did not persist as a guiding principle. Soon magic re-entered medical practice and remained until nineteenth century science accepted the challenge and restored the Hippocratic tradition. That is to say, in the ranks of the medical profession magic no longer exerts any influence, but unfortunately this is not true of the lay public which, as the old Latin adage tells us, "likes to be deceived." It is a sad fact that the anxious patient would sometimes prefer a bit of hocus-pocus in the attention

of his family doctor. Often he will renounce the trained medical man and seek comfort in the advice and irrational ritual of the herbalist, faith-healer and quack. To the medical practitioner who is doing his best for his patient this attitude can be very irritating, but it should be remembered that it is merely another instance of the savage within us bursting through the logical confines in which scientific progress has enclosed us. Sooner or later science will win and magic be forced into dark corners; it may take longer than we expect as the powers of darkness are still mighty in human nature. The great practical issue is that not only must we offer good education to boys and girls, but that we should be conscious of this urge to let the elemental savage within us take over the direction of our lives. Precept and example, opportunities for work and healthy recreation are to be consistently offered, whilst in the case of the boy and youth it would be wise if we did not allow reaction against the severe corporal punishments in past times to lead us to the opposite extreme.

HUMAN BETTERMENT

No great improvements in the lot of mankind are possible until a great change takes place in the fundamental constitution of their modes of thought.

—JOHN STUART MILL

. . . and until their biological evolution is much further advanced, he might have specified.

NATURE AND MAN

Nature, generous and heartless, extravagane and miserly as she is, is our Mother and our only teacher, and she is also the deceiver of men. Above her we cannot rise, below her we cannot fall. In her we find the sea and soil of all that is good, of all that is evil. Nature originates, nourishes, preserves, and destroys.

Every brain is a field where nature sows the seeds of thought, and the crop depends upon the soil.

—ROBERT G. INGERSOLL (1899)

OFFICIAL REPORTS

REPORT OF THE COORDINATING COMMITTEE ON THE COMMUNITY ASPECTS OF SOCIETY

COMMITTEE ON ACADEMIC EDUCATION—
Chairman, Bryant M. Wedge: The major project of this committee is to explore resources within and outside the government for the scientific study of problems of youth. As the result of this study there is the possibility of the publication of a survey of these resources for the use of psychiatrists and other investigators. Secondly, the committee hopes to make recommendations for the establishment of an office of scientific, youth information for the collection and codification of source data, the encouragement of research and the publication of accurate scientific data concerning problems in this field. They are working with a representative of the National Institute of Mental Health.

The committee sponsored a roundtable on the International Problems of College Mental Health and a section on psychiatry and academic education at the annual meeting.

COMMITTEE ON CIVIL DEFENSE—*Chairman*, Calvin Drayer: This is a new standing committee added to this coordinating committee group. They are currently involved in a joint project with the federal civil defense administration for the evaluation of mental hospitals in civil defense. This is entirely in the investigative phase and will be carried on during the coming year.

COMMITTEE ON INDUSTRIAL PSYCHIATRY—*Chairman*, Ralph T. Collins: This committee developed an exhibit on industrial mental health which has been shown at various business and professional meetings, most recently at the National Industrial Health Conference held in St. Louis. It is the first time that this topic has been presented at the Industrial Health Conference, and it created a great deal of interest. The exhibit currently is on display at the Kingsport (Tenn.) Mental Health Association Clinic during mental health week.

A brochure on mental health hints for

personnel people is being prepared and will be published within the next year.

There is a great increase of interest in the field of industrial psychiatry both by personnel and management groups as well as psychiatrists. The members of this committee are constantly in demand for talks and meetings with representatives of business throughout the country.

COMMITTEE ON INTERNATIONAL RELATIONS—*Chairman*, Iago Galdston: This committee is concerned with many aspects of our international relations in the field of psychiatry, with our foreign members, foreign guests, and momentarily is very much interested in the possibility of the regional meeting in Florida which would include psychiatrists from Central and South America.

The committee sponsored an afternoon session at the annual meeting on the "Perspectives on International Psychiatry" with five distinguished speakers from foreign countries. Also they arranged a luncheon for our foreign guests and conducted a dinner roundtable on the "Relation of Social Ethics, Religious Principles and Psychiatry" using four distinguished speakers from foreign countries.

COMMITTEE ON COOPERATION WITH LEISURE-TIME AGENCIES—*Chairman*, Alex R. Martin: This committee is thoughtfully considering the preparation of a monograph series dealing with the mental health concerns of leisure. They have obtained a film "Osborn on Leisure," which can be used by the members of the Association as well as leisure time agencies for educational purposes to civic groups. The committee is also considering other methods of the use of mass communication media.

Their major interest is to enlist much further than hitherto the membership of The American Psychiatric Association in giving of their skills and knowledge to

leisure-time agencies, both at the national and particularly at the local level. It is hoped this might be greatly increased through the district and affiliate branches. This particular committee has carried on extensive consultations and conferences with many types of leisure-time agencies, in order that it may be in a more effective position to provide leadership and assistance to psychiatrists who will, at the local level, work with such agencies.

COMMITTEE ON NATIONAL DEFENSE—*Chairman*, Joseph S. Skobba: The Committee on National Defense is continuing its analysis of the survey of medical officer opinion concerning the military program as a career. It is also concerning itself with the steps taken under the MEND program to teach military psychiatry in our medical schools.

COMMITTEE ON PREVENTIVE PSYCHIATRY—*Chairman*, Lloyd J. Thompson: This committee has continued to focus its major working effort on preventive mental hygiene at various stages of life, preparing a comprehensive bibliography of material available from many sources dealing with the periods of infancy, pre-natal life, natal life, neo-natal life, infancy and pre-school years. It is the hope that such material might prove helpful to workers in all fields of health as well as to educators, clergy, lawyers and others. The committee conducted a roundtable at the annual meeting on the parent-child relationships during the pre-school years.

COMMITTEE ON PUBLIC INFORMATION—*Chairman*, Dr. Robert Morse: After 5 years of work the committee has completed and published a psychiatric glossary, 20,000 of which have already been sold. The booklet on "Psychiatry, the Press and the Public" has sold over 6,000 copies. The committee assisted in drafting two widely publicized releases this year, one on tranquilizing drugs and the other on drug addiction. The com-

mittee has given much time and thought with an organization known as "official films" which represents Mr. Paddy Chayefsky, to the development of a pilot TV program to be offered to commercial sponsors. An increasing number of manuscripts from science writers have been received by the committee with a request for editorial review during the past year. Commendations in increasing number have been received by the Association for the method of handling our press relationships at the annual meeting. It is expected that upwards of 100 reporters will attend this year's meeting.

COMMITTEE ON VETERANS—*Chairman*, David J. Flicker: This committee's assignment is to improve the lot of the mentally disabled veteran as well as to improve the status of our members who are engaged in caring for these patients. They have focused on the improvement of the salary scale for physicians in the Veterans Administration. They have undertaken to change the pattern of the budgetary allotments of the VA so that consideration will be given to those hospitals that have an active turnover picture instead of just a large daily patient load. The committee sponsored a roundtable at the annual meeting on the subject of "The VA and Medical Education—A deteriorating relationship?" The committee continues to keep contact with the major veterans organizations as well as an awareness of the pending legislation so that American psychiatry may have a hearing where this is indicated.

As the retiring chairman of this coordinating committee, I again want to commend to the membership of this Association the earnestness, thoughtfulness and hard work that our committees are giving to their assigned task in behalf of American psychiatry.

WILLIAM C. MENNINGER, M. D.,
Chairman.

REPORT OF COORDINATING COMMITTEE ON PROFESSIONAL STANDARDS

The Committee on Relations with Psychology: This Committee continues to work actively with the corresponding committee of the American Psychological Association. It

is watching closely all legislation in this field. It has run into a problem of interpretation of certification as against licensure and is seeking clarification of this point through

legal opinion so that all District Branches and constituent groups of the American Psychiatric Association may have a sound legal basis for a stand in one direction or the other. As this opinion is obtained, it will be circulated to the membership.

The Committee on Nomenclature and Statistics: This Committee has prepared a practical coding system for the gathering of data and use of statistics in psychiatric facilities and is currently trying it out. It is expected that these studies will lead eventually to the publication of a manual. The Committee has found it necessary to define certain common terms and may plan to survey with an interested research group what laymen usually mean by some of these terms. For example, the Committee has prepared a tentative definition of psychotherapy.

The Committee on Standards and Policies of Hospitals and Clinics: This Committee has held several meetings in New York and Chicago as well as the regular meeting in Washington. The Committee has participated in the development of a conference on a national level on volunteers in mental hospitals. This conference will be held in Chicago during June, 1958. Preparatory commissions have been formed and will hold their initial meetings in the immediate future. Certain general changes have been suggested regarding the standards and policies of public hospitals in cooperation with the Central Inspection Board and will later be submitted to Council. Also a revision of standards for chaplains in public psychiatric hospitals has been submitted to the *ad hoc* Committee on Religion and Psychiatry. Finally, an introductory statement on standards for public psychiatric out-patient clinics will be submitted to Council and as approved or amended, will serve as a basis for the writing of standards and policies for such clinics.

The Committee on Psychiatric Social Work: This Committee has dealt with a tentative draft of Standards for Clinical Social Workers distributed by the United States Civil Service Commission. This was an unsatisfactory document. Final action on it was successfully deferred through efforts of your Social Work Committee. The second portion of this draft was studied and

approved. In addition, the Committee is working quite closely with groups of psychiatric social workers and continues to study collaboratively the relationships between psychiatry and psychiatric social work. A Round Table on the "integrated role of the social worker in medical teaching" was presented at the 1957 annual meeting.

The Committee on Legal Aspects of Psychiatry: This Committee has obtained, without cost to the Association, the services of a well-qualified and interested attorney. The Committee is working on the preparation of a model uniform law dealing with the question of privilege. A proposed law has been prepared and this is now to be coordinated with the Committee on Legal Aspects of Psychiatry of the American Bar Association. After agreement is reached, the draft will be presented to Council for approval. In addition, the Committee is working on the problems of including abduction, false arrest, false imprisonment, etc. in malpractice insurance laws, and hopes to resolve this problem. Your Committee was represented in Vermont in a special panel discussion which resulted in the introduction in the Vermont Legislature of a bill to abolish the M'Naghton rule.

The Committee on Private Practice: This Committee conducted a Round Table at the annual meeting on health insurance plans, which it is hoped will result in a report suitable for publication in the Journal. The Committee has been invited to sit with Blue Cross and with the Health Insurance Institute to try to work out some of the problems of definition and description in relation to hospitalization of the mentally ill. The Committee is working also on the problem of fees charged by psychiatrists to doctors and their dependents. The American Psychoanalytic Association had made a survey of its members. The Committee on Private Practice is carrying out a similar survey of the members of the American Psychiatric Association. This will be done to start with by use of a questionnaire.

The Committee on Psychiatric Nursing: This Committee has continued to work on the numerous problems in this field in collaboration with the several nursing organizations. The National League for Nursing

has prepared a proposal for psychiatric aide teacher-training and the Council of the A.P.A. has authorized joint sponsorship of this program with no expense to the Association. Your Committee is still working with the National League on the details of this program and in attempting to raise funds to carry it out.

All of the Committees in this group have continued to work hard and long on the many problems referred to them by Council,

by the Executive Committee, or inherent in their original mission. As Chairman of the Coordinating Committee, I should like to express my gratitude to the chairmen and members of the several Committees and to Council and the Executive Committee for their cooperation, as well as to the members of the staff of the several offices of the APA.

WILFRED BLOOMBERG, M. D.,
Chairman.

"WHILE HUMAN NATURE REMAINS THE SAME"

Many and grievous were the things which befell cities in those revolutionary struggles [between Greek city-states leading to the Peloponnesian War]—things which occur now and will always recur while human nature remains the same, albeit with more or less violence and in different forms according to the particular turn of events. For in peace and prosperity both cities and private men are better disposed, since they are not under the constraint of necessity. But war is a violent schoolmaster: it robs men of their day-to-day margin of sufficiency and debases the character of most to the level of circumstances.

—THUCYDIDES

UTOPIA

In the Twentieth Century war will be dead, the scaffold will be dead, hatred will be dead, frontier boundaries will be dead, dogmas will be dead; man will live. He will possess something higher than all these—a great country, the whole earth, and a great hope, the whole heaven.

—VICTOR HUGO

UTOPIA

Science can, if it chooses, enable our grandchildren to live the good life, by giving them knowledge, self-control, and characters productive of harmony rather than strife. At present it is teaching our children to kill each other, because many men of science are willing to sacrifice the future of mankind to their own momentary prosperity. But this phase will pass when men have acquired the same domination over their own passions that they already have over physical forces of the external world. Then at last we shall have won our freedom.

—BERTRAND RUSSELL
(What I Believe, 1925)

NEWS AND NOTES

NEW YORK CITY COMMUNITY MENTAL HEALTH BOARD.—Dr. Maurice H. Greenhill was inducted on May 27, 1957 by Mayor Robert F. Wagner, as executive director of the N. Y. City Community Mental Health Board. He succeeds Dr. Paul V. Lemkau, who returned to his post as professor of public health at Johns Hopkins University.

A consultant to the surgeon-general of the Army since 1948, Dr. Greenhill is also chief consultant in psychosomatic medicine at Walter Reed General Hospital, a consultant to the VA, and special consultant to the surgeon-general of the U.S. Public Health Service in community service and research. He is the author of the revised commitment laws of North Carolina.

The N. Y. City Community Mental Health Board is a city agency which plans, finances, and coordinates mental health services of public and voluntary agencies. Its budget for the coming year will be over 19 million dollars.

Members of the Board are: Joseph W. McGovern, acting chairman; Grace Abbate, M. D., Leona Baumgartner, M. D., Sol W. Ginsburg, M. D., Frank E. Karselen, Henry L. McCarthy, Mrs. Alice W. Fordyce, and George Kent Weldon.

PSYCHIATRIC REHABILITATION INSTITUTE, DUKE UNIVERSITY.—A 5-day Regional Institute on Psychiatric Rehabilitation was held June 10, 1957, at Duke University, Durham, N. C. This pilot institute was conducted by the Duke University School of Medicine under the auspices of the Department of Health, Education and Welfare, U.S. Public Health Service. Twenty-seven counselors in the Vocational Rehabilitation Departments of 8 states and Puerto Rico were in attendance. Instructors included the psychiatric faculty of Duke University, industrial physicians and personnel, social service and VA officers.

This Institute on Psychiatric Rehabilitation was the first of its kind in the Southeast.

MEDICAL ASSOCIATION OF SOUTH AFRICA.—The 20th annual scientific meeting and the 41st Medical Congress of the Medical Association of South Africa will be held in Durban, Natal, Sept. 16-21, 1957. The headquarters of Congress will be at Red Cross House, Old Fort Road, Durban. There will be 4 plenary sessions as follows:

1. Cerebral Vascular Disease and the Problem of Ageing. Speakers: Sir Russell Brain, President of the Royal College of Physicians of London; Dr. M. M. Suzman, Johannesburg; Dr. F. H. Kooy, Cape Town; Keith L. Allen, Johannesburg; and Prof. E. L. Bortz, Philadelphia.

2. The Parasitic Diseases of Man in Africa. Speakers: Dr. Michael Gelfand, Salisbury, S. Rhodesia; Charles Marks, Salisbury, S. Rhodesia; and Dr. R. Elsdon-Dew, Durban.

3. The Surgery of Repair. Speakers: Sir Harry Platt, President of the Royal College of Surgeons, England; William Gissane, Birmingham; and Prof. T. Pomfret Kilner, Oxford.

4. Recent Advances in Child Care. Speakers: Prof. Alan Moncrieff, London; Dr. D. M. T. Gairdner, Cambridge; and Dr. H. L. Wallace, Durban.

In addition to these plenary sessions there will be numerous scientific sectional meetings in all the recognized specialties. At one of these meetings Prof. V. Kinross-Wright of the department of psychiatry, Baylor University, Houston, Tex., will speak on "New Horizons in Chemotherapy."

INSTITUTE OF PSYCHIATRIC TREATMENT, PHILADELPHIA, PA.—The 5th annual Institute of Psychiatric Treatment will be held in Philadelphia, Pa., October 17, 18, and 19, 1957. For further information write: Dr. Leo Alexander, Chairman, 433 Marlborough St., Boston 15, Mass.

SCHOLARSHIPS FOR TEACHERS OF BLIND CHILDREN.—For the first time in its history, the South will establish its own year-

round program for training teachers of blind children. Five \$1500 scholarships are available for qualified teachers who wish to take this special training, sponsored by the American Foundation for the Blind, the Southern Regional Education Board, and George Peabody College for Teachers, Nashville, Tenn. The American Foundation will support the regional program financially for the first 3 years, and is contributing over \$50,000 for scholarships and a professorship.

Applicants for these scholarships should write to Dr. Lloyd M. Dunn, coordinator of special education, George Peabody College for Teachers, Nashville 5, Tenn., where the training will be given.

ADMINISTRATIVE APPOINTMENTS, N. Y. STATE DEPARTMENT OF MENTAL HYGIENE.—Four major administrative appointments in the N. Y. State service became effective July 1, 1957, as announced by Commissioner Paul H. Hoch.

Dr. Arthur G. Rodgers, director of Binghamton State Hospital, became director of Syracuse State School; Dr. Ulysses Schutzer, assistant director of Central Islip State Hospital, succeeded him as director of Binghamton. Dr. Charles Greenberg, director of Craig Colony, was appointed senior director of Rome State School and Dr. William C. Johnston, former assistant director of Matteawan State Hospital, succeeded him as director of Craig Colony.

ADOLF MEYER MEMORIAL AWARDS.—Dr. D. Ewen Cameron and Dr. A. E. Moll, Allan Memorial Institute, were selected as recipients of the 1957 Adolf Meyer Memorial Awards bestowed for meritorious contributions on behalf of improved care and treatment of the mentally ill, inside and outside of institutions. The award is made by the Association for Improvement of Mental Health.

NORTH SHORE HOSPITAL LECTURE SERIES.—Dr. Samuel Liebman, medical director of the North Shore Hospital, announces that the topic of the Eighth Annual Lecture Series for 1957-58 will be, "Emotional Problems of Childhood." The lectures will be given on the first Wednesday

of every month from October 1957 through June 1958 (2nd Wednesday in January) at the hospital, 225 Sheridan Road, Winnetka, Ill., at 8:00 P. M.

The American Academy of General Practice has approved attendance at this program as meeting their standards for graduate training.

The entire lecture series will be published in 1958 by J. B. Lippincott Co., Philadelphia. Each of the authors and the Board of Directors of the North Shore Hospital have assigned all royalties that will accrue from the sale of this book to The American Psychiatric Association.

HONORS FOR DR. KANNER.—It is a pleasure to note that the Royal Medico-Psychological Association of Great Britain has invited Dr. Leo Kanner, chief of the Children's Psychiatric Service, Johns Hopkins Hospital, to deliver the annual Maudsley Lecture in London, England, November, 1958. Dr. Kanner will be the third psychiatrist from the West and the first child psychiatrist to be so honored. The others were Dr. Charles K. Clarke of the University of Toronto, and Dr. Adolf Meyer of Johns Hopkins University.

Further, Dr. Kanner's services to the Johns Hopkins School of Medicine have been recognized by his appointment as professor of child psychiatry. This represents the first professorship in child psychiatry to be established at the Johns Hopkins University.

ILLINOIS PSYCHIATRIC SOCIETY.—In May 1957, the following members of the Illinois Psychiatric Society were elected to office for the year 1957-58: president, Dr. Kalman Gyarfás, Chicago, Ill.; vice-president, Dr. Nathaniel S. Apter, Chicago, Ill.; secretary treasurer, Dr. Alberto de la Torre, Chicago, Ill.; councilors: Drs. Hugh Carmichael and V. C. Urse, Chicago, Ill.; delegate to assembly of district branches of The American Psychiatric Association: Dr. John R. Adams, Chicago, Ill.; alternate delegate: Dr. Isadore Spinks, Chicago, Ill.

DELAWARE PSYCHIATRIC SOCIETY.—At the recent meeting of the Society, the following officers were elected for the year

1957-58: president, Dr. George DeCherney; vice-president, Dr. James Flaherty; secretary-treasurer, Dr. Walter Davis; councilors: Drs. Charles Katz and Sanford Rogg.

AMERICAN SOCIETY FOR PUBLIC ADMINISTRATION.—At the annual dinner at Albany, N. Y., of the Capital District Chapter of the Society, May 1957, Mrs. Marie Yegella, a teacher at Wassaic State School, won recognition for her pioneering work with severely retarded children when she received the Governor Charles E. Hughes Award in Public Administration. The award is given for significant achievements in public administration which are of outstanding value and usually represent efforts "beyond the call of duty." Mrs. Yegella, working with children with serious physical disabilities, as well as severe mental defects and I.Q.'s under 50, has developed techniques and goals which are now accepted and taught generally.

The Governor Alfred E. Smith award for achievement in a staff position was made at the same time to Dr. Robert F. Korn, assistant commissioner for program development of the Health Department.

PSYCHIATRY IN NEW ZEALAND.—A vigorous program in psychiatry has been instituted at the University of Otago Medical School under the supervision of Dr. Wallace Ironside, senior lecturer. A course of optional lectures in medical psychology is given to 3rd year students, together with clinical tutorials in connection with the department of psychiatry at Dunedin Hospital, of which Dr. Ironside is the senior psychiatrist. The department maintains a senior and junior psychiatrist, a psychologist, psychiatric social worker and a child psychologist.

Emphasis is also placed on child guidance, with conferences held once a fortnight to which are invited those who have to deal with child patients in other fields.

NEW JERSEY NEURO-PSYCHIATRIC INSTITUTE.—The fifth annual psychiatric institute will be held at the New Jersey Neuro-Psychiatric Institute, Princeton, N. J., on Sept. 18, 1957. The general topic for discussion is: Disciplines in Modern Psychiatric Treatment.

Among the participants are: William Malamud, Harry Solomon, Franz Alexander, Robert A. Matthews, Richard Sweigert and Benjamin Simon.

SOUTHERN MENTAL HEALTH COUNCIL.—The Southern Regional Council on Mental Health Training and Research met in Louisville, Ky., June 28-29 to consider several proposed projects and elect officers for the coming year.

The Council, which consists of one member from each of the 16 participating states appointed by its governor plus 8 members appointed by the SREB, was established by the Southern Governors Conference of 1954 after a year-long regional study by the Southern Regional Board of the problems states face in dealing with mental illness and health.

Projects considered at its Louisville meeting included: a proposed experiment in the education of the mentally retarded; exchanges of personnel among mental hospitals for in-service education; and a study on the economic value to states of providing adequate mental care.

A.C.L.S. AID TO THE HUMANITIES.—The American Council of Learned Societies has announced their three-fold program to further humanistic studies. Beginning with the academic year 1958-59, \$300,000 will be made available in three classifications: 1. Fellowship grants to provide opportunities for younger scholars to complete research projects in the humanities or to extend their competences by extensive study. 2. Grants-in-aid, for significant humanistic research in progress. Candidates for these 2 classifications must hold a doctorate or its equivalent in the field of the humanities and be normally under 45 years of age. 3. Special awards for the completion of distinguished works in the humanities by mature scholars nominated by academic or other professional societies.

The humanistic area of learning is interpreted in general as including the following: philosophy, including the philosophy of science and the philosophy of law; philology, language, literature, and linguistics; archae-

ology, art history and musicology (but not applied art or music); history, including the history of science and the history of religions; and cultural anthropology, including folklore. Programs in the social sciences and the natural sciences which have a humanistic emphasis will also be considered.

Completed applications must be received before Sept. 15, 1957, January 15, and March 15, 1958 for Grant-in-aids and before October 15, 1957 for Fellowship Grants. Address: ACLS Grants Program (or ACLS Fellowship Program), 2101 R St., N. W., Washington 8, D. C.

EUPHEMISM

It is reported that Dr. Thurnam in 1895 proposed that in England the County Pauper Lunatic Asylum should be called The Orthophrenic Institution.

MRS. PACKARD AND HER "REFORM"

The entire annals of the insane in the State of Illinois furnish no greater evidence of cruelty to the insane and their friends than this so-called 'reform,' so zealously promoted by Mrs. Packard. As a matter of fact, more persons were found insane by jury trials . . . than were ever wrongfully committed under the earlier system. The effect on the patient was frequently detrimental, arousing in his mind the idea that the court proceedings were for the purpose of substantiating some charge against him, and when found insane he believed himself innocently condemned.

—RICHARD DEWEY,
(*Am. J. Insan.*, 69: 571, 1913)

NURSE EVERYWOMAN

Every woman, or at least almost every woman, in England has, at one time or another of her life, charge of the personal health of somebody, whether child or invalid,—in other words, **every woman is a nurse.** . . .

If, then, every woman must at some time or other of her life, become a nurse, i.e., have charge of somebody's health, how immense and how valuable would be the produce of her united experience if every woman would think how to nurse

—FLORENCE NIGHTINGALE,
Notes on Nursing, 1859

BOOK REVIEWS

PSYCHISCHE HYGIENE. Edited by *Erwin Stransky, M.D., and Ernst Brezina, M.D.* (Wien-Bonn: Wilhelm Maudrich, 1955.)

Nine authors have contributed to this book. Nevertheless, an astonishing degree of homogeneity has been achieved, since the contributions of the various authors are clearly influenced by the thinking and previous publications of Stransky, whose main concepts and psychiatric attitudes permeate the entire book. Already in 1931, Stransky, in collaboration with other authors, has published the first German text on mental hygiene. The aim of mental hygiene, according to Stransky, is on one side the preservation of the healthy part of the population in their state of mental health and, on the other, protection of the endangered and susceptible part of the population, (psychopathic personalities recurrent psychoses, behavior problems in children and adolescents, etc.) from such harmful influences as may aggravate their precarious state. Stransky is quite anxious to stress this twofold nature of his mental hygiene concept, since particularly in America, according to his opinion, the second aspect has been overly stressed, almost to the exclusion of the first aspect. Both aspects, according to Stransky, should be taken care of primarily by physicians who are the only ones who can draw the line between necessary and harmful popularization of medical knowledge.

The various authors give due credit to Clifford Beers and Adolf Meyer, but chiefly build on European and particularly Viennese foundations. In his chapter on the history of mental hygiene, Holzer goes back to the ancient Greek philosophers as well as Hippocrates, Marcus Aurelius, Paracelsus, and then calls attention to the interesting and important work of the Austrian physician, scholar and poet, Freiherr von Feuchtersleben. In 1838, Feuchtersleben published a book *Zur Diätetik der Seele*, in which he stresses the principle of prophylaxis in a similar way as it is now being stressed by Stransky. Nevertheless, the impact of the American mental hygiene movement was needed to make mental hygiene, even in the fatherland of Feuchtersleben, into more than a theoretical concept and an attitude of mind on the side of the physician. In his emphasis on prophylaxis Stransky stresses the importance of reasonable diffusion of information, counselling centers, and social work agencies. Since he attributes a great deal of importance to eugenics he is interested in premarital counselling. Even in mild cases of cyclic endogenous depressions he warns against marriage, stressing the hereditary and eugenic factor to a greater extent than is customarily done. The same rather rigid view is extended to patients with convulsive disorders, and one is surprised that in connection with epilepsy, heredity and marriage, the importance of the electroencephalo-

gram is not even mentioned. In major neuroses too, due to emphasis on the constitutional factor, eugenic prophylaxis is being stressed, but it is strongly emphasized that human rights and human dignity should not be encroached upon. Stransky is therefore opposed to legislative measures in this connection. The constitutional, hereditary point of view permeates the entire book. In therapy Stransky stresses his "subordination authority relation." He considers Freudian concepts chiefly as products of phantasy.

Other collaborators are not as radical in their rejection of Freud, and Poetzl who has written an introduction to the book, while recognizing the importance of Stransky's "subordination authority relation," feels constrained to state that he, Poetzl, considers Freud's work as empirically proven. While Stransky does not agree with Poetzl in this respect, he also rejects Pavlov and Speransky's reflexological orientation. In his condemnation of Freud he is particularly extreme: "I would like to say that concerning this specific kind of psychopathization of our present society with all its consequences, the Freudian movement is not entirely guiltless. This movement and its derivatives in the English speaking world have given rise to a kind of slogan used by millions of laymen . . . nothing is more harmful than an undigested half-knowledge, particularly a half-knowledge which accepts theses as little founded as those of Freud and Adler as given facts."

A more moderate, thoroughly eclectic and thoroughly mature view concerning psychotherapy and its methods is presented in the chapter on 'psychotherapy and mental hygiene' by Hans Kogerer. While he denies the particular therapeutic efficacy of psychoanalysis his thinking is deeply influenced by Freud. He accepts Freud's findings concerning infantile sexuality, the importance of instincts and drives, but argues against the partition into conscious and unconscious and "its personification as ego and id." This as well as the concept of the ideal ego and super-ego Kogerer considers as metaphysical constructions of the antimetaphysician Freud. The antithesis of pleasure and reality principle he views in a similar light as a metaphysical construction. Next to Freud, Kogerer has been influenced most by Kretschmer, Jung, Adler, Frankl and Kronfeld. In the reviewer's opinion he has succeeded in integrating effectively the fundamentals of these various schools of psychotherapy. His chapter may be of particular interest to the general American psychiatric reader who is well acquainted with the Freudian but not with the other psychotherapeutic approaches.

In his chapter on 'mental hygiene and crime,' Stransky again stresses the hereditary constitutional point of view and states that in America the importance of the milieu has been overrated, although

he, himself, does not deny it. He feels that American pedagogics are too permissive and in this connection too stresses the "subordination authority relation" approach.

In other chapters the relationship of mental hygiene to physical hygiene, sociology and economics are being discussed. One is somewhat surprised to see which progressive steps in Austria, or at least in Vienna, have been taken. There is, for instance, routine mental hygiene counselling at the end of Highschool for healthy students (emphasis on prophylaxis). In Vienna there are special counselling centers for suicidal risks (Beratungsstellen fuer Lebensmuede).

The entire book is on a high level and reflects the European point of view on mental hygiene. That this point of view in many aspects is considerably different from ours makes the book particularly interesting and worthwhile reading. While one may not agree with all conclusions one can not fail to be impressed by the originality of many of the proposed points of view and by the thoroughness with which the entire field has been covered.

ALFRED GALLINEK, M. D.,
Columbia Presbyterian Medical Center,
New York City.

CRESTWOOD HEIGHTS: A STUDY OF THE CULTURE OF SUBURBAN LIFE. By John R. Seeley, R. Alexander Sim, and Elisabeth W. Loosley. (New York: Basic Books; and Toronto: Univ. of Toronto Press, 1956. \$6.50.)

This book describes many aspects of life in Suburbia—a particular Suburbia, to be sure—but with features common to suburban (and in many ways urban uppermiddle class) society throughout North America. It is an important book for psychiatrists whose private clientele is drawn largely from this section of the population. In addition it has much to say that is relevant to the psychiatrists themselves, both as members of this social stratum and also as practitioners.

Since few psychiatrists, in all likelihood, will want to tackle such a thick book on a subject that may seem tangential to their main concerns, I would recommend that as many as possible read with care Part 3: Integration, and Part 4: Implication. Part 3 summarizes and sorts out the material of the preceding 300-plus pages. Part 4 raises problems that mental health experts of all kinds must face but that many of us are scarcely aware of.

These 2 sections are related to the rest of the book in the same way that a summary at a psychiatric case conference is related to the life history and details of clinical contacts with the patient. They are, in addition, very stimulating reading, particularly as they deal with the role and functioning of our professional fraternity. The views expressed may engender strong reactions for and against; they should certainly stir us into a greater awareness of our potentials and responsibilities to society.

DOROTHEA C. LEIGHTON, M. D.,
Trumansburg, N. Y.

JUDAISM AND PSYCHIATRY. Edited by Simon Noveck. (New York: The National Academy for Adult Jewish Studies, 1956. \$2.50.)

This book is another welcome indicator of the rising tide of interest in religion and psychiatry. Five well known Rabbis and 10 competent psychiatrists have joined forces to provide us with a most useful and enlightening volume. Almost all of the papers were originally presented as informal talks to adult education classes of the Park Avenue Synagogue, and now appear under the skillful editorship of Rabbi Noveck in highly readable form. The purpose of the book as stated by the editor is "to present some of the teachings of the Jewish tradition on the basic emotional problems which confront us as human beings, and to analyze the psychological values which can come from following the Jewish way of life." To accomplish this the subjects of Conscience and Guilt, Fear and Anxiety, Depression, and Self-Acceptance are discussed from both the psychiatric and Jewish points of view. There are also excellent discussions on The Meaning of Personal Religious Experience, The Value of Ritual, and The Need to Belong, to mention only a few of the chapter headings. The final section is devoted to 3 statements (by one Rabbi and two psychiatrists) addressed to the question: "Can Judaism and psychiatry meet?"

Although the answer to the above question is in the affirmative, there remains for the authors a keen recognition of the essentially different and separate areas of the 2 fields, even though they may appear to overlap or demonstrate, at times, a superficial similarity. This is but one example of the spirit of common sense and intelligent appraisal which runs through the entire book.

Both Jew and non-Jew will enjoy the many pertinent quotations and examples from the Old Testament, Talmud, and other Jewish writings. There is an excellent bibliography which omits, for some inexplicable reason, any reference to Martin Buber, the great contemporary Jewish theologian who has contributed so importantly to this very subject. This book can be safely recommended to any person, lay or professional, who wishes to understand some of the fundamental precepts of the Jewish faith, and how they relate to the emotional problems of everyday living.

ZIGMUND M. LEBENSOHN, M. D.,
Washington, D.C.

HOW TO IMPROVE YOUR MIND. By Baruch Spinoza, with Biographical Notes by Danabert D. Runes. (New York: Wisdom Library (Philosophical Library) 1956. \$95. Soft Binding.)

This 90 page text is a translation from the Latin *De Intellectus Emendatione*, by R. H. M. Elwes. From the mid-twentieth century standpoint the title is deceptive. The book is not a psychiatric self-help poster of the type with which we are all too familiar. The contemporary social climate is rather curious, probably different from anything before experienced. An unfortunate side effect of the real of our fraternity to educate the public is to make

many a sensitive brother or sister morbidly mind-conscious. Such persons function better and more comfortably as little aware as possible of their physiology, whether of mind or body. But we do not allow them to be unaware. Through a flood of books and other means of communication we spread before them an assortment of nervous symptoms they are liable to; then if the inoculation "takes," it is of course necessary to write more books full of antidotes. We increase the demand and then the supply.

Spinoza's text is not that kind of book. Spinoza is a philosopher and he writes like one, with frequent references to his profounder and more detailed books. His method is what he calls pure reason by which the relativeness of qualities is appreciated. Thus in nature nothing is that must be either one thing or the other, *i.e.*, either good or bad. It becomes such only in relation to the self. One must therefore strive to know as much about nature, all of nature, as possible, thus acquiring knowledge of God, for God and nature are one and

the same. Man thus attains to an *amor dei intellectualis* free of all emotional involvement.

Spinoza, the philosopher, using the language of his *metier*, addresses himself in as simple terms as possible to those, nevertheless, who are able to assimilate his canons of logical thinking. Obviously he is not speaking to those not so endowed; and, like Kant, he assumes the existence of this something called "pure reason."

He found that the goals that the multitude commonly seeks are riches, fame, and pleasures of the senses; and he apprehended these as unworthy and unsatisfactory goals; he must find something beyond and above all these, nothing less indeed than "the knowledge of the union existing between the mind and the whole of nature." Attaining such knowledge he must help others to attain it also. That was his purpose in writing this book, and its value lies in letting us look in upon the mind of this great man at work. He was only 26 years old when he wrote it.

C. B. F.

NEW GERMAN PSYCHIATRICA AND PSYCHOLOGICA

HANS A. ILLING, LOS ANGELES, CAL.

TIEFENPSYCHOLOGIE. DEPTH-PSYCHOLOGY. By *Friedrich Seifert*. (Dusseldorf and Koeln: Eugen Diederichs Verlag, 1955. DM 15.80.)

Tiefenpsychologie is a postwar coinage in the German-speaking countries. Among the best of a flood of new titles is this one with the subtitle, *Die Entwicklung der Lehre vom Unbewussten*. Significantly for American readers, Seifert divides the science into a "magnetic field" of the theories of Freud and Adler in one part and a "magnetic field of ideas" of Jung in another, both parts being quite equal in extent. So far as the part on Jung is concerned, this is probably the best integration and interpretation to be found in any domestic or foreign work, even though Seifert seems to incline toward Jung, since in Germany much tiefenpsychologie rests on mythology, alchemy, religion, and parapsychology. In the part on Freud, particularly in the chapter on "Psychoanalytische Nervenlehre," Seifert stresses the origins of Freud's psychoanalysis, including sociological, cultural, historical, and even religious factors, but omits medical factors, an approach hardly shared by most American analysts.

GESATZE UND SINN DES TRAUMENS. By *K. Leonhard*. (Stuttgart: Georg Thieme, 1955. DM 11.70.)

In this more specialized monograph on tiefenpsychologie, medical psychologist Leonhard makes the claim that most psychotherapists in Germany reject Freud's as well as Jung's theories (the former basing his interpretations on dreams on sexual symbols, the latter on collective archetypes) and that "one could agree with one or the other or with neither." (A claim which, in this reviewer's opinion, the author himself inconsistently refutes in

his own "theories," since one would have to "agree" with him.) Interpretation of dreams, in Leonhard's opinion, is to be avoided, since dreams contain "unconscious powers, which complement the achievements of the conscious in harmonious co-operation."

PHANTASIE. By *Karl Heymann*. (Basle: S. Karger, 1956. S.frs. 9.35.)

INFANTILISMUS. (Basle: S. Karger, 1955. S.frs. 20.80.)

The first monograph deals with the phantasy and its various implications for social hygiene, education, the arts, and political science. The author is an educational psychologist, and his book is one of a large series of monographs devoted largely to education and child welfare. The author believes that phantasy is a phenomenon that one has to deal with clinically and as an observer. Only when the researcher picks up the single pieces can he understand the whole idea of the phantasy as an extra- rather than intrapsychic phenomenon in our emotional life.

In the second monograph published by the same author, a number of savants have participated, half of them of the medical-psychiatric discipline. Differing from our American type of research, in Europe it is the medical profession that pioneers in projective tests, particularly the Rorschach (since Rorschach was a psychiatrist), whereas our psychiatrists seem to have a hands off attitude. The infantile individual gets in this volume a thorough treatment and is studied as a soldier, in vocational counseling, with first graders in elementary schools, mental defectives, and delinquents.

WILLE UND LEISTUNG. By *Karl Mierke*. (Goettingen: Verlag fuer Psychologie, Dr. C. J. Hogrefe, 1955. DM 28.60.)

Here an attempt is made on the basis of experiments to arrive at conclusions as to the interrelationships between the methods of experimental psychology and those of psychodiagnostics, as well as between comparative and the *verstehende* (comprehending) psychology. Analyzed and illustrated are a series of concepts of "achievements," such as work and achievement, capacity of achievement, drive for achievement, trend of determination and Gestalt, and a host of others.

MYSTERIUM CONIUNCTIONIS. Vols. I and II. By *C. G. Jung*. (Zurich: Rascher Verlag, 1955, S.frs. 12; and 1956, S.frs. 16.)

Jung's latest opus appears in two volumes, the third and final one having been announced for early 1957. The first volume contains Chapters I through III, the second volume Chapters IV through VI. Jung's theory of the archetypes seems to have been worked out to the finest detail and is based on the alchemists' many-sided symbols. For instance, Chapter V deals with Adam and Eve, the various sources of biblical and scholarly origins, such as the Kabbala, interpretation of names, etc. For the student of Jung these three volumes will probably constitute the Master's swan-song and be an absolute "Must"; for the researcher, however, they will mark the zenith of philological scholarship.

ERFAHRUNGEN MIT GRUPPENPSYCHOTHERAPIE. By *Adolf Guggenbuehl-Craig*. (Basle: S. Karger, 1956. S.fr. 8.—.)

The author gives his readers a report of his visit to, and internship in, the Nebraska Psychiatric Institute, where he observed, studied, and practiced group psychotherapy in 1955. This little monograph is one of the best of its kind and demonstrates how much can be stated in a small space and yet avoid the pitfall of oversimplification. To be sure, much material, historical, clinical, methodological, is missing. But the brief bibliography, consisting of 31 references, all Anglo-Saxon material, contains perhaps the essence of group-therapy literature.

KRITIK DER PSYCHOSOMATIK. By *Hans Joerg Weitbrecht*. (Stuttgart: Georg Thieme, 1955. DM 12.)

DIE KRANKHEIT NICHT KRANK SEIN ZU KOENNEN. By *Hans Mueller-Eckhard*. (Stuttgart: Ernst Klett Verlag, 1955. DM 12.)

These two major publications emphasize the polarity of opinion in German-speaking countries today concerning psychosomatics. Strangely enough, it is the medical writer Weitbrecht who appears to be opposed to "those analysts and psychiatrists" who strive toward therapeutic and who modify Freud's theory of the neuroses into a "universal anthropology." He quotes particularly Franz Alexander as one of the principal pro-

tagonists of how "psychosomatics may be applied to every phenomenon which exists within the living organism." This, the author feels, is a "materialistic monism," which is the antithesis of the "idealistic spiritualism" mainly represented by the German psychosomatic practitioners.

In contrast to Weitbrecht, Mueller-Eckhard advocates not only spirituality, which he feels psychiatrists, including the German, do not have, but also a movement back from the physio-chemical point of view of "neuropsychiatry," and the push-button treatment of a patient who needs more than that. In fact, he claims that it is the psychiatrists who have contributed to, and have increased, the incidence of mental illness, at least in German-speaking countries. In many instances, as in shock therapy, the author has found confirmation in many medical sources both in Germany and in this country. At the same time, his book, one of the best-written in psychiatry, cannot escape oversimplification and general statements which are simply not correct. Nevertheless, reports which have reached this reviewer indicate that this book, published less than a year ago, has already sold more than 100,000 copies, is advertised in medical journals (outside of neurology and psychiatry) and seems to have done tremendous damage, thanks to psychiatrists themselves.

PSYCHOGENE ERKRANKUNGEN BEI KINDERN UND JUGENGLICHEN. By *Annemarie Duehrssen*. (Goettingen: Verlag fuer Medizinische Psychologie, 1955. DM 18.)

The author, co-editor of the *Zeitschrift fuer Psycho-Somatische Medizin*, and a child psychiatrist, writes in a neo-analytical fashion, being a student of Harald Schultz-Hencke. However, she wishes the reader to know that Freud's theory on childhood neuroses, whether psychosomatically conditioned or not, was developed further by Adler and Kuenkel. She speaks as a medical psychologist and wishes to avoid "interdisciplinary difficulties" in writing her text, even though she seems to be aware that there may be more nonmedical than medical practitioners of various disciplines engaged in child psychology. There are few books like hers that blend harmoniously the physiological and psychological aspects of child development from infancy to adolescence.

KINDERPSYCHOTHERAPIE IN NICHT-DIREKTIVEM VERFAHREN. By *Reinhard and Anne-Marie Tausch*. (Goettingen: Verlag fuer Psychologie, Dr. C. J. Hogrefe, 1956. DM 8.60.)

This book by two educational psychologists is unique in German literature, insofar as it is probably the first dealing with Rogerian nondirective psychology, translated into German phraseology, methodology, and setting. The volume is based almost entirely on Rogers and Axline; it is listed here because of its uniqueness and novelty, since American readers can be considered as largely familiar with this school of psychology.

THE EVALUATION OF THE EFFECTS OF DERIVATIVES OF RAUWOLFIA IN THE TREATMENT OF SCHIZOPHRENIA¹

WILLIAM MALAMUD, M.D., WALTER E. BARTON, M.D., ALICE M. FLEMING, M.D.,
PETER McK. MIDDLETON, M.D., TOBIAS T. FRIEDMAN, M.D., AND
MAXWELL J. SCHLEIFER, PH.D.²

In this communication we wish to present the results of a study, the purpose of which was to evaluate certain aspects of the effects of a number of derivatives of Rauwolfia in the treatment of patients suffering from schizophrenia. Shortly after the introduction of the use of Rauwolfia or some of its derivatives in the treatment of hypertension, it was noted that they also exerted a beneficial effect upon certain psychopathological symptoms, notably anxiety, tension, worry and irritability, and have come to be popularly known as "tranquillizing" drugs. Since then, these substances along with others which were found to produce more or less similar effects, have been widely used in the treatment of personality disturbances and a considerable amount of literature has accumulated on this subject. Whereas it is generally agreed that beneficial results can be obtained with the use of these drugs, a number of questions have not been satisfactorily answered, and in regard to other questions there is considerable lack of agreement. The particular questions which appear to us to have been left in doubt are the following: What are the relative therapeutic merits of each one of the specific derivatives of Rauwolfia as compared with one another? How do these effects compare with an adequately controlled use of placebos? How well are the beneficial effects, if any, maintained after the termination of treatment? Are there any specific psychopathological phenomena that are especially likely to be beneficially affected by any or all of these drugs regardless of the general effect in a given disease entity?

The present study was undertaken to try to answer these questions. Six derivatives

of Rauwolfia were selected for study, each one being designated by its generic name, with the trade name in parentheses. The actual names of these drugs, as well as the placebos, were not known to those who administered the medication and recorded the observations, the various substances being designated by letters of the alphabet, and it was only after the completion of the study that the code letter was translated into the appropriate name of the substance.

All drugs and placebos, regardless of actual dose, were administered in a uniform manner as follows: 2-cc. ampules by intramuscular injection for 21 days, followed by 3 small tablets daily for the rest of the period (total period of treatment 12 weeks). Another group received orally 3 large tablets daily for 21 days, followed by 3 small tablets daily for the rest of the 12-week period. We did not find any appreciable difference in the effects of each drug whether administered intramuscularly or orally, and in our final evaluation of the effects, we have combined the results of the two methods of administration. Two of the drugs, viz. Rauwiloid and Serpalkon, were administered only orally to one group each. The following is a list of the drugs used, with a brief statement concerning their nature and their general physiological and pharmacological effects.³

1. *Alseroxylon* (Rauwiloid), designated by letter G. This is a selected fraction of the Rauwolfia alkaloids from which the sympatholytic and hypertensive alkaloids have been removed. It represents the total anti-hypertensive, bradycardic and sedative activities of Rauwolfia *Serpentina*. Dosage: Large tablets containing 20 mg. each and

¹ Read at the 113th annual meeting of The American Psychiatric Association, Chicago, Ill., May 13-17, 1957.

² From the Division of Psychiatry, Boston University School of Medicine, and the Clinical Service of the Boston State Hospital, Boston, Mass.

³ All of these substances, including placebos, were furnished by the Riker Laboratories, Inc. For this material and for some financial help, as well as valuable advice and suggestions in the setting up of this study, we are indebted to the Riker Laboratories.

small tablets containing 6 mg. each. Number of patients—15.

2. *Reserpine* (Serpiloid), designated by letter C. This is one of the pharmacologically active alkaloids obtained from *Rauwolfia*. It manifests sedative, bradycardic and anti-hypertensive actions, apparently manifested through the hypothalamus. It tends to have depressive sequelae. Dosage: Ampules 5 mg. per cc.; large tablets 3.3 mg. each; small tablets 1 mg. each. Number of patients—33.

3. *Rescinnamine* (Rescamine), designated by letter A. This is another alkaloid of *Rauwolfia* which manifests anti-hypertensive and bradycardic action. It differs from reserpine in that it is less prone to produce excessive sedation. Dosage: Ampules 5 mg. per cc.; large tablets 3.3 mg. each; small tablets 1 mg. each. Number of patients—31.

4. *Deserpidine* (Recanescine), designated by letter B. This is still another pharmacologically active derivative of *Rauwolfia*. It has been shown to produce approximately the same anti-hypertensive and sedative responses as reserpine. Dosage: Ampules 5 mg. per cc.; large tablets 3.3 mg. each; small tablets 1 mg. each. Number of patients—33.

5. A combination of reserpine (60%), rescinnamine (20%), and deserpidine (20%), under the trade name of *Triserpine* and designated by letters E and H. Laboratory data indicate that potentiation results from an administration of the mixed alkaloid in its effects upon hypertension. Dosage: Ampules 5 mg. per cc.; large tablets 3.3 mg. each; small tablets 1 mg. each. Number of patients—29.

6. Another fraction from *Rauwolfia Serpentina* of Indian origin, composed of primarily weak bases but not totally alkaloidal, under the trade name of *Serpalkon*, was designated by letter F. It manifests the typical *Rauwolfia* effects of sedation, bradycardia and hypertension. Dosage: Large tablets 4 mg. each; small tablets 1.2 mg. each. Number of patients—17.

7. Finally, placebos, designated by letter D, and obviously containing none of the above alkaloids. It too was administered in the form of ampules, large and small tablets. Number of patients—34.

All of these substances were administered

in approximately equal numbers of cases orally and by injection. The capsules and ampules were identical in appearance in all cases, and, in order to reduce further the possibility of subjective influences, the same substance was sometimes used under two separate letters to avoid the possibility of influencing the evaluation of the effect of any given one of these substances. It is because of this that we actually had 12 differently designated substances.

PROCEDURE

The patients used were all chronic schizophrenics who had been hospitalized for over 2 years and some of them had been previously treated by other methods, without any appreciable effects. We have selected chronic schizophrenics for the following reasons: in the first place, after a period of observation and study, the diagnosis was less likely to be in doubt; secondly, it is a well known fact that in the acute cases of this disease, almost any form of therapy frequently produces transient or even more prolonged states of remission. This was obviated by the fact that they were chronic patients. Thirdly, in the acute phases of the disease, there is always the justifiable tendency to try a variety of methods of therapy. In the chronic patients, however, it was easier to restrict ourselves to one method only and then wait for results of a follow-up study. Finally, a great deal has been said about the fact that some of these drugs are particularly likely to produce good results in the chronic hospitalized patients, thereby reducing materially the burden of accumulation of a great many chronic cases, and we were especially interested in testing this contention.

Two hundred forty patients, male and female, were selected with the idea of having an initial 20 patients for each of the substances designated by a special letter. The patients were selected out of a large number of cases in the hospital; and an initial psychiatric examination was done in each case, paying particular attention to the duration of the illness and of hospitalization, the history of the onset and course of the disease, its severity and the particular types of disturbances manifested during the course. The

mental status of each patient was recorded before the beginning of treatment. The patients were assigned to each one of these substances with a view to having, as far as possible, a similar distribution of the type of patient and nature of the disease in all of the groups, so that we could subsequently have a more reliable basis for evaluation of the effects of each drug. In order to determine the specific effect of each one of these substances on certain types of psychopathological disturbances, we chose a number of behavioral items which could be readily observed both by the psychiatrist and the ward personnel, and changes in each one of these items was noted by subsequent examinations during the 12 weeks treatment in each case, again shortly after the termination of treatment, and then at the end of a 6-months to one year follow-up period. These behavioral items were as follows: anger, combativeness, noisiness, disturbances in activity (either hyperactivity or retardation), difficulties in cooperation and in communication, autism, untidiness, aloofness, disturbances in affect, disturbances in night rest, and, finally, disturbances in food intake. The status of each one of these behavioral phenomena was recorded in terms of good, fair or poor, before the beginning of treatment. This was essential since in the different patients, regardless of the severity of their illness, some of these items may not have shown any apparent pathology and obviously the final results, if satisfactory, would have to be evaluated against the background of the original status. The evaluation of each item in terms of possible change related to the treatment, was undertaken during the course of the 12 weeks of treatment, a short while after the withdrawal of the drug, and then at the end of the follow-up period. In this way we hoped to be able to obtain some information not only as to the specific effect of a given substance on a special psychopathological phenomenon, but also as to how well this effect can be maintained after the drug has been discontinued. Finally, at the end of the follow-up period, a general evaluation of the condition of the patients as compared with their original status was made by the combined hospital personnel in terms of improvement, as contrasted with either no

change or even a worsening of the condition.

For a number of reasons, some of the 240 patients had to be dropped from the study, and we finished at the end of the follow-up period with 192 patients, 45 males and 147 females. One hundred eighty-three of these patients were diagnosed schizophrenia all through their stay in the hospital. In 9 patients, other diagnoses were made at certain times during their hospitalization, but the condition at the time of the beginning of the treatment was primarily that of a schizophrenic psychosis. In the following chart (Chart 1), we have tabulated the general information concerning these patients in regard to the distribution of age, sex, duration of the illness and of hospitalization, the substances used and the numbers of patients treated by each substance.

During the study, observations were checked when possible by two or more persons so as to exclude personal equations. We also made observations on any side effects, particularly where untoward complications occurred. In only 3 patients of the original group we had to interrupt treatment because of physical complications. In two of these, the administration could be resumed after a period of interruption; in one, however, the treatment had to be discontinued.

RESULTS

The nature of the behavioral items which served as the basis of this evaluation, as indeed the nature of schizophrenia itself, makes it impossible to report results in terms of exact quantitative differences. At best, we can compare changes in each of these behavioral items and in the status of the patient as a total personality in qualitative terms, noting particularly whether a given behavior item or the general status of the patient at any given time was either "good," "fair" or "poor." It was also impossible to assign proper weighting to each one of these items on a quantitative basis. Thus, for instance, we could not say with certainty whether an improvement in an originally pathological state of affect was more or less important than similar changes in autism or disturbed activity. We therefore concen-

CHART 1

Patients	Number 192	Male 45	Female 147
Course of illness	Duration of illness: 2-35 years Median: 14 years	Hospital stay: 14-35 years Median: 12.5 years	
Substances used	Alseroxylon (Rauwolfoid) 15 patients	Reserpine (Serpiloid) 33 patients	Rescinnamine (Rescamine) 31 patients
		Deserpidine (Recauscine) 33 patients	(Triserpine) 29 patients
			(Serpalkon) 17 patients
			Placebo 34 patients

trated entirely upon recording the qualitative changes in a given item as observed in patients treated with one drug as compared with what occurred in a similar item in patients treated by other drugs or placebos. It must also be kept in mind that certain behavioral items may have shown no appreciable degree of disturbance in individual patients, which meant that in comparing the effects of these substances we had to take into consideration not only the condition at any time during the period of observation, but also the original status of that item before treatment was started. The absence of a change in any one of these items either to the better or worse did not necessarily mean that the drug had no effect, but might be dependent on the fact that the condition of that particular behavior function was not pathological in the first place and therefore could not change to the better although it could become worse. Similarly, where the condition was very poor to begin with, the end result could not become any worse although it could change to the better. With these points in mind we wish to report the following results:

1. *Effects of these substances in terms of consistent changes in the various items during the course of treatment.* These results are tabulated in Chart 2. Here we find that combining the effects on all of the items and allowing for the possible movement towards either improvement or worsening of the condition, the various substances, including the placebos, range themselves in a general order of rank with "1" indicating the greatest effect towards improvement and "7" indicating little or no beneficial effect, or even a worsening of the condition. The results indicate 2 bases of comparison:

a. Since in each item the highest beneficial effects are indicated by the lowest numbers, the sum total of the ranks of all 12 items will provide a rank order of the 7 substances used, and in this respect, Triserpine with a total of 29 will rank as the most effective, whereas the placebos with a total of 70.5 will rank seventh or least effective, with the rest arranged in order between these two.

b. The various drugs show tendencies towards specific effects on certain items. Thus, for instance, Triserpine seems to show the

CHART 2

THERAPEUTIC EFFECTS DURING COURSE OF TREATMENT

Drug E-H	Anger	Assaultiveness	Noisiness	Activity	Cooperation	Communication	Autism	Untidiness	Aloofness	Affect	Night rest	Food intake	Total
Combination of A, B and C (Trisperine) 29 patients.....	6	3	2	3	2	1	1	1	1	2	3	4	29
A													
Rescinnamine (Rescamine) 31 patients	1	1	1	2	1	2	2	2	7	6.5	5.5	7	38
G													
Alseroxylon (Rauwiloid) 15 patients	2	6	3	6	4	7	6	3	5	1	1	1	45
C													
Reserpine (Serpiloid) 33 patients.	5	5	4	4	3	5	4	4	3	4	4	2	47
B													
Deserpidine (Recaniscine) 33 patients	3	2	5	1	6	6	5	7	2	5	5.5	3	50.5
F													
Serpalkon 17 patients	4	4	6	7	7	3	3	6	6	3	2	5	56
D													
Placebo 34 patients	7	7	7	5	5	4	7	5	4	6.5	7	6	70.5

comparatively highest effect on communication, autism, untidiness, aloofness and affect; whereas rescinnamine shows comparatively high effects on the first 8 of the 12 items. Occasionally we find a drug, as, for instance, deserpidine, which may show very little effect on most of the behavior items, but the highest effect on a specific one (activity). Here too we find that the placebos tend to rank mostly at the bottom of the list. Two things must be remembered in evaluating the results in this particular chart. First, they represent primarily symptomatic effects during the actual administration of the drug and this, obviously, does not indicate so far to what extent these beneficial effects may be maintained after the drug has been discontinued. Secondly, they do not, of necessity, indicate any quantitative weighting of these effects. Thus, in the case of Trisperine, although 4 of the items are ranked 1, therefore indicating that during the treatment this substance has produced the comparatively highest beneficial effect on these particular items, nevertheless there was not quite as much difference between 1 and

7 in this group of items as there was, for instance, in regard to the first 5 items in which rescinnamine seems to have been most effective. The differences here between ranks 1 and 7 were much more distinct and reliable than in the case of the items affected by Triserpine. Actually the items in which Triserpine ranks first, were representative of the basic disturbances of schizophrenia and none of the drugs produced any marked effect on these symptoms.

2. *The maintenance of the effects after the termination of treatment and at the end of the follow-up period.* These results are tabulated in Chart 3. The most striking contrast in this chart is to be observed in the comparison between rescinnamine (Rescamine) which ranks 1st and the placebos which rank 7th. Both are consistent in maintaining the effects produced, but, whereas rescinnamine seems to maintain its highest degree of efficiency throughout the period of study both in regard to specific behavioral items and the general evaluation, the placebos remain throughout the same period with the least beneficial effects. It must be added, however, that this

CHART 3

RANK ORDER OF THERAPEUTIC EFFECTS OF THE DRUGS THROUGHOUT THE PERIOD OF TREATMENT AND FOLLOW-UP

Drug	Course of treatment	Termination of treatment	6-12 months follow-up symptoms	6-12 months follow-up general evaluation
A				
Rescinnamine (Rescamine). 2	2	1	2	
G				
Alseroxylon (Rauwiloid) . 3	4	2	3	
E-H				
Combination of A, B and C (Triserpine) 1	2	3	7	
F				
(Serpalkon) 6	7	4	4	
C				
Reserpine (Serpiloid) 4	1	5	5	
B				
Deserpidine (Rescanscine) 5	5	6	1	
D				
Placebo 7	6	7	6	

difference is only comparative. Actually when we compare the results at the end of the follow-up period, we find that in the patients treated with rescinnamine, 29% were improved and 71% were unchanged or worse, whereas the figures for the placebos were 16% improved and 84% unchanged or worse.

In regard to the evaluation of the other drugs, it is of interest to note that reserpine showed its best effects shortly after termination of the treatment, but failed to maintain these effects by the end of the follow-up period either in regard to effects on specific behavior items (Column 3) or in the general status (Column 4). Furthermore, Triserpine which ranked 1st in effectiveness during the course of treatment, consistently lost ground during the follow-up, and showed particularly poor results in the general evaluation at the end of follow-up. Finally, deserpidine, which was consistently low in its effects on specific behavior items (Columns 1, 2 and 3), was found to have most improvements, as judged by general evaluation, at the end of the follow-up period (31% im-

provements and 69% unchanged or worse). This may be due to the fact that the original beneficial effects of this drug were to reduce the disturbances in activity and assaultiveness and these effects were well maintained. It is easy to see that in a general evaluation of the adjustability of the patient, these two items would be particularly important.

Throughout the study, particular attention was given to the development of side effects of these substances. All the drugs showed such effects and they were, of course, absent only in the patients receiving placebos. These side effects were, generally speaking, quite mild and consisted of drooling, stuffiness of the nose, somnolence, loose stools, restlessness, depression and transitory mild parkinsonian symptoms. These were liberally sprinkled among all the drugs and subsided as the treatment progressed. A few patients who showed more definite parkinsonian symptoms were treated successfully by temporary suspension of the drug and administration of Cogentin 2 mg. t.i.d. Where untoward symptoms failed to subside, treatment was discontinued. There was one fatality in which the official postmortem diagnosis was cardiac decompensation and was not considered by the pathologist as due to the drug. This patient manifested signs of cardiac disease before and it is likely that such a condition should be considered as a contraindication for the use of these drugs. This remains questionable, however, and can only be more positively answered after further observations.

In the present communication we have restricted ourselves to a certain sector of the data relevant to the questions posited in the introduction. Some features such as the significance of the background of the patients studied, the nature and severity of the illness in individual cases, the specificity of side effects in relation to each drug and a number of others require further analysis and we propose to deal with these in future communications.

SUMMARY AND CONCLUSIONS

Six derivatives of Rauwolfia were used in the treatment of a series of chronic schizophrenics, and the therapeutic results were

compared among themselves and with results obtained through the use of placebos. The patients were selected with consideration of adequate matching and were evaluated psychiatrically before treatment. The course of their illness was systematically studied during the administration of the treatment and for a period of 6 months to one year after termination of the treatment. The comparison of the effects of both drugs and placebos was in terms of changes in specific behavior items, as well as the general evaluation of their clinical status and adjustment in the hospital or outside as judged by the hospital personnel. The results obtained justify the following conclusions:

1. The drugs differed from one another in terms of the degree of beneficial effect on the general condition of the patients, some being more effective than others; and all the drugs were more effective than the placebos. However, the spread was not too wide and some improvements were observed even in the patients to whom placebos were administered.

2. The effects of the drugs showed a trend toward specificity in that each drug tended to have a greater effect upon certain behavior items than was obtained with other drugs.

3. In the case of some of the drugs, the beneficial effect produced during treatment was maintained after termination and through the follow-up period, whereas in others this effect was not maintained.

DISCUSSION

WERNER TUTEUR, M. D. (Elgin, Ill.). The term "chronic schizophrenic," in connection with studies on tranquilizing drugs, is frequently misleading. Many a long standing patient in a mental institution has been mislabeled through the years. In our studies at Elgin State Hospital for the past years we have been restricting ourselves to admitting patients to special studies by symptoms rather than by diagnoses. We feel that thus we may at least avoid one source of error, that of diagnosis. This is entirely permissible as long as we have to treat in our field unspecific illnesses with unspecific means.

The double blind method of investigation remains the most reliable at this time, yet the pitfalls of it have been mentioned in the literature (1, 2), and were it not for the fact that scientists invariably give the active compound a bias and that only too frequently there is a watering of the patient's con-

dition on placebos, it might become a valuable tool in psychiatric drug research. Experienced ward personnel may easily demoralize "blinded" investigators by expressing their valuable opinions as to "loaded or blank" medication. Severe warnings regarding this are necessary on the part of the chief investigator at the beginning of each study.

Twelve weeks of treatment with active compounds, experimentally, is gratifyingly long in contrast to many studies where patients are kept on the compounds for a much shorter period.

Quantitative evaluations remain difficult, and it is doubtful whether any of the individual derivatives affect certain symptoms, since the psychiatric symptom remains entirely the patient's personal property and has to be interpreted as such.

The authors mention nothing regarding discharge of any of their patients. If the follow-up study was performed while patients remained in the institution, then due allowance has to be given to the protecting institutional environment which continued after the patients had been taken off medication.

As a whole, reserpine and its derivatives have decreased in popularity, mainly because patients with long institutional records frequently have a low blood pressure which discourages the use of Rauwolfia. Yet, it is felt that eventually Rauwolfia will claim its definite place among the tranquilizers.

BIBLIOGRAPHY

1. Tuteur, Werner, and Lepson, David. *Tranquilizing Drugs*. Publication No. 46 of the American Association for the Advancement of Science. Washington, D. C. 1957.
2. Sainz, A., Bigelow, N., and Barwise, C. *Psychiat. Quart.* Vol. 31, No. 1. January 1957.

DISCUSSION

NORMAN MORGAN, M. D. (Warren, Pa.).—It is immensely gratifying to discuss a paper such as this one by Dr. Malamud and his colleagues. Past experience has led us to expect from this group only meticulously designed studies which make the results appear deceptively easy. An important body of basic data has been added to the subject of tranquilizing drugs.

We have come to accept the double blind technique and the pooling of clinical evaluation to avoid personal bias as necessities in clinical research. One is curious to know why such a large number as 20% of the original group should have to be dropped. Although 183 patients is a considerable number, it must be remembered that each test group comprised only 15 to 33 cases.

The eternal problem to the research worker is the nature of the questions he should ask. What does he want to know, first, and second what questions must he ask to find the answers. Of the 4 questions that are the basis of this paper, the first 3 are relatively uncomplicated: the rating of the therapeutic effects on 12 symptoms of 6 Rauwolfia derivatives as compared with each other and placebo.

bos, and according to the maintenance of the effect after treatment termination.

The fourth question seeking "specific psychopathological phenomena that are especially likely to be beneficially affected" hints at a larger issue which seems to me to be the significant one raised by this paper. This point is brought out by the authors in their discussion of the results. It was observed that deserpidine, which was consistently low in the comparative rating on its effect on the 12 specific behavior items, nevertheless was judged to have the greatest therapeutic effect in the final general evaluation. The criteria for rating the final evaluation are not clear in this paper. The 12 symptoms assessed do not add up to a total personality. Presumably other criteria are involved in the nature of "one's general impression."

The authors suggest that the high final rating is the result of the beneficial effect of this drug on activity and combativeness, which are benefits considered particularly important by the workers. This being no doubt true, the following question is naturally raised: toward what goal is improvement being rated? Toward social conformity, less noise on a disturbed ward, less autistic activity, better

integration of the total personality? Goals in therapy appear deceptively obvious.

At a certain stage of research, improvement must be measured in terms of specific symptoms. Which symptoms are most informative about the totality of the patient depends largely on one's frame of reference. It may be that as we find basic symptoms which are significant measures of the total personality we can develop greater specificity in seeking and employing drugs. For example, drugs which affect combativeness may affect the total personality functioning more significantly than drugs affecting mutism.

The fact that a drug should apparently show persistent therapeutic benefit 6 to 12 months after it is administered, suggests that it influences not only the symptoms *per se*, but some factor basic to the symptom. It implies some basic personality change that makes combativeness, for example, no longer necessary to the patient.

Although the authors have specifically avoided rating the 12 symptoms as to qualitative importance, it is to be hoped that further analysis of the data will impel them to speculate on this aspect of their observations.

A BIOCHEMICAL EVALUATION OF THE ACTIVITY OF CERTAIN TRANQUILIZERS AND THEIR RELATIONSHIP TO HORMONAL FUNCTION^{1, 2}

MALCOLM GORDON, PH. D., WILLIAM ZELLER, M. D., AND JOHN DONNELLY, M. D.³

INTRODUCTION

While the physiological and biochemical changes now known to be produced by the phenothiazines are many, thus far no theory of their action is adequate to explain, or at least fully explain, their usefulness in psychiatric practice. However, the physiological impact of the phenothiazines on the endocrine systems are perhaps most promising in providing a biochemical rationale for their action.

Chlorpromazine is known to effect pituitary-gonadal function(1); pituitary-thyroid function(2); thyroid function(2); adrenal-cortical function(3); and adrenalin function(4, 5), while clinically lactation and alteration in menstrual function are not uncommon sequelae of chlorpromazine administration.

Studies of the effects of chlorpromazine on some aspects of amino acid metabolism, a function effected by a variety of hormones, will be reported here. Interest in this property of the phenothiazines developed from the work being carried out in our laboratory on the biochemical effects of several hormones on nitrogen metabolism. Elsewhere we have reported on the effects of a variety of hormones on nucleic acid metabolism and protein synthesis(6).

EFFECT OF INSULIN ON SERUM AMINO ACIDS

Among the hormones studied with particular interest was insulin. For some time it had been known that the injection of insulin sharply lowers the concentration of serum

amino acids as well as the concentration of blood sugar(7). We became interested in the question of whether or not the amino acid effect was of any significance in the promotion of certain behavioral changes noted with some schizophrenic patients receiving insulin coma therapy.

First investigated was the possible interdependence of the two phenomena: do amino acids change as a function of glucose change? This question was approached as follows: the coma dose of insulin was established in the usual fashion. Treatment was continued on this dosage together with continuous intravenous injection of glucose given in an amount sufficient to maintain the approximate fasting blood glucose level. During the procedure the patients remained fully alert. The data presented in Tables 1 and 2 demonstrate that the amino acid and glucose effects of insulin are completely separable. The fall in circulating amino acids under the influence of insulin or under the influence of insulin plus glucose are virtually identical.

FATE OF AMINO ACIDS

The question of the fate of the amino acids under conditions of insulin-glucose was then investigated. Elsewhere we have reported that the amino acids are taken up into compounds (nucleic acid-amino acid derivatives) which are probably precursors of protein(6). This effect was demonstrated with rat livers. Table 3 shows something of the variety of amino acids detected by paper chromatography in these nucleic acid-amino acid derivatives, and their increased concentration with insulin. It is not surprising, therefore, that the concentration of the several amino acids in blood under the influence of insulin were approximately equally decreased.

CHANGES IN AMINO ACIDS IN CSF

The influence of this changed physiological state on the nutritional milieu of the brain

¹ Read at the 113th annual meeting of The American Psychiatric Association, Chicago, Ill., May 13-17, 1957.

² This investigation was supported, in part, by the Office of Naval Research, under Contract #NOnr 1850 (00) (01), and, in part, by the medical Research and Development Board, Office of the Surgeon General, Department of the Army, under Contract #DA-49-007-MD-204.

³ Institute of Living, Hartford, Conn.

TABLE 1
REACTION OF SERUM AMINO ACID NITROGEN TO INSULIN

Subject	Treat- ment day	Units of in- sulin ad- ministered	Time of Samples (in hours)								Stage ¹	Maximum ² change of AAN in %
			0		1		2		3			
			AAN ¹	G ²	AAN ¹	G ²	AAN ¹	G ²	AAN ¹	G ²		
1	1	10	4.2	91	4.30	—	4.2	—	3.3	—	1	-20%
1	5	100	5.0	90	4.4	45	3.7	48	3.0	40	2	-40%
2	5	120	4.6	95	3.9	44	3.0	26	2.3	26	2	-50%
1	6	120	3.5	80	3.5	57	3.1	49	2.4	47	2	-32%
2	6	140	5.4	102	5.1	75	4.0	34	2.9	40	3	-46%
1	10	220	4.6	120	3.9	90	3.0	44	2.3	47	2	-49%
2	10	220	4.4	115	3.5	66	2.8	35	2.5	17	3	-45%
1	11	240	5.4	84	4.7	17	3.4	23	2.4	29	2	-59%
2	11	220	5.2	109	3.9	36	3.3	23	2.4	21	3	-54%
1	15	300	4.1	85	3.2	29	2.6	34	2.3	25	2	-44%
1	20	380	5.0	108	4.4	42	3.5	24	2.6	14	3	-48%

¹ AAN = mg. % amino acid nitrogen in serum.

² G = mg. % total reducing substances in same blood sample.

³ Stage = stage of coma as described by Kalinowski.

⁴ Maximum change in AAN (%) = % change calculated by finding the difference between zero time value and minimum value. The difference is divided by zero time value.

TABLE 2
REACTION OF SERUM AMINO ACID NITROGEN TO INSULIN WITH I.V. GLUCOSE

Treat- ment day	Units of in- sulin	10% Glucose I.V. (ml.)	Time of Sample (in hours)								Stage ³	Maximum change in AAN (%)
			0		1		2		3			
			AAN ¹	G ²	AAN ¹	G ²	AAN ¹	G ²	AAN ¹	G ²		
31	380	500 ml.	4.6	104	3.8	85	3.2	75	2.8	61	I	-40%
35	380	600 ml.	4.4	121	4.1	84	3.0	67	2.7	53	I	-36%
36	380	600 ml.	4.5	104	3.3	83	2.9	64	2.4	76	I	-45%
40	380	500 ml.	4.7	113	4.1	87	3.2	69	2.6	73	I	-45%
41	380	500 ml.	4.3	103	4.2	89	2.9	99	2.8	87	I	-37%
45	400	600 ml.	4.7	109	3.8	81	3.3	73	2.6	75	I	-45%
46	400	600 ml.	4.8	107	4.1	72	3.3	62	2.3	68	I	-52%
50	400	600 ml.	4.7	105	3.9	81	3.0	74	2.4	72	I	-48%
51	400	600 ml.	4.9	111	3.8	102	2.9	59	2.4	69	I	-51%
55	400	600 ml.	4.7	108	4.0	79	3.0	67	2.5	63	I	-48%
56	400	600 ml.	4.8	114	4.1	85	3.0	76	2.4	78	I	-51%
60	400	600 ml.	5.0	106	4.1	81	3.0	71	2.4	70	I	-52%

¹ AAN = mg. % amino acid nitrogen in serum.

² G = mg. % total reducing substances in same blood sample.

³ Stage = stage of coma as described by Kalinowski.

⁴ Maximum change in AAN (%) = % change calculated by finding the difference between zero time value and minimum value. The difference is divided by zero time value.

was our next concern. While it is recognized that changes in the cerebrospinal fluid obtained by lumbar puncture do not promptly reflect central nervous system metabolism at higher levels, it was hoped that some indication of the changed physiological picture with glucose-insulin would be demonstrable in the spinal fluid.

Table 5 shows some of the changes in total amino acid nitrogen under the influence of both insulin and insulin-glucose. The spinal fluid appears (at least quantitatively) to reflect the changes in amino acids observed in serum. Detailed analysis of the concen-

tration of the individual amino acids in spinal fluids under varying hormonal stimulations are as yet incomplete, but preliminary experiments suggest that the nature of the changes does not exactly reflect the changes in serum. Studies by other workers⁽⁸⁾ of the transfer of C¹⁴-methionine across the blood-brain barrier in the rat report a fall in transfer rate after injection of insulin. But whether this reflected a drop in efficiency of barrier mechanisms due to glucose deficiency, or the preferential uptake of the methionine in other tissues under the influence of insulin, or whether it represented a specific effect of

TABLE 3

AMINO ACIDS FOUND IN "NUCLEIC ACID-AMINO ACID" FRACTIONS OF LIVER UNDER VARIOUS CONDITIONS¹

	Control	Insulin ²
1. Aspartic and ² Asparagine.....	1	3
2. Glutamic and Glutamine.....	4	4
3. Serine.....	—	4
4. Glycine.....	4	4
5. Threonine.....	1	2
6. Alanine.....	4	4
7. Tyrosine.....	1	1
8. Tryptophan, Valine, and Methionine.....	2	4
9. Phenylalanine.....	1	2
10. Leucines.....	4	4
11. Arginine.....	—	1
12. Histidine and Lysine.....	1	3

¹ Paper chromatography of 6 N hydrolyzed nucleic acid-amino acid fractions. Phenol-water, and acetic acid-butanol-water. Spots developed with ninhydrin spray.

² Semi-quantitative evaluation of amino acid concentration by visual approximation of intensity and diameter of spot.

³ Animal given 10 units insulin with ad libitum 10% glucose. Sample obtained after three hours.

insulin on the blood-brain barrier mechanisms could not be concluded from the data presented. From the results reported in Table 5 we can at least conclude that changes in the amino acids of spinal fluid occur independently of the effects that the deficiency

TABLE 4

AMINO ACIDS IN SERUM BEFORE AND AFTER TREATMENT WITH INSULIN¹

	Control	Insulin ²
Total ³ (mg. amino acid nitrogen/100 ml. serum).....	4.3	2.9
1. Aspartic and Asparagine ⁴ ..	60	40
2. Glutamic.....	55	37
3. Glutamine.....	790	560
4. Serine.....	100	70
5. Glycine.....	150	100
6. Threonine.....	90	60
7. Alanine.....	150	100
8. Tyrosine.....	100	70
9. Tryptophan, Valine, and Methionine.....	310	190
10. Phenylalanine.....	80	50
11. Leucines.....	210	140
12. Arginine.....	150	110
13. Histidine, and Lysine.....	390	280

¹ Paper chromatography of deproteinized and deionized serum samples. Solvent: phenol-water and acetic acid-butanol-water. Spots developed with ninhydrin spray, cut out, extracted and further developed with ninhydrin made to standard volume and color read at 570 mμ.

² 220 units insulin administered after removal of control sample. Insulin sample after 3 hours.

³ 1 μg. amino acid nitrogen per 100 ml. serum.

⁴ In micrograms of amino acid/ml. serum.

TABLE 5

EFFECT OF INSULIN ON TOTAL AMINO ACID NITROGEN OF SPINAL FLUID

	Control	Insulin ¹	Insulin ² plus glucose
Case I.....	214 ²	176	164
Case II.....	190	166	154
Case III.....	186	160	148

¹ Insulin administered without glucose to establish coma dose for each patient. Spinal fluids taken 3 hours after insulin administration, when coma about Stage 3 of Kollinowski.

² After 3 weeks of insulin-glucose treatments. No coma. Sample taken 3 hours after initiation of 22nd insulin-glucose treatment.

³ In microgram equivalents of glutamic acid/ml. spinal fluid. (Ninhydrin reaction on deproteinized spinal fluid sample.)

of glucose may have upon the integrity of the blood-brain barrier.

EFFECT OF INJECTED PHENOTHIAZINES ON AMINO ACIDS

The next step was to carry out comparable studies with certain tranquilizers. Chart 1

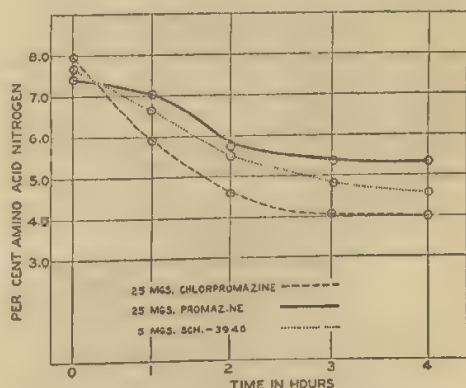


CHART 1.—Changes in serum amino acid nitrogen of rats after I.M. injection of Chlorpromazine, Promazine, and SCH-3940.

shows the effects of various phenothiazines on the level of amino acids in serum. These effects are of the same kind found with insulin (and certain other hormones). Here again the amino acids appear in the nucleic acid-amino acid fractions of liver, but their level in cerebro-spinal fluid falls, as is found with insulin or insulin plus glucose (Table 6).

The effect of the following drugs on the level of amino acids in serum and spinal fluid in animals was also tested: amytal,

TABLE 6

EFFECT OF PHENOTHIAZINES ON TOTAL AMINO ACID NITROGEN OF SPINAL FLUID

	Control	Experimental
Case I ¹	194 ⁴	182
Case II ²	180	172
Case III ³	190	168

¹ 5 mg. Trialaon I.M. Sample taken after 2 hours.² 50 mg. chlorpromazine I.V. Sample taken after 2 hours.³ 40 mg. chlorpromazine I.V. Sample taken after 2 hours.⁴ In microgram equivalents of glutamic acid/ml. spinal fluid. (Ninhydrin reaction on deproteinized spinal fluid sample.)

phenobarbital, equanil, saline, glucose. Only glucose gave any significant changes, which probably reflects its action on endogenous insulin production.

COMPARISON OF EEG DATA WITH BIOCHEMICAL DATA

Preliminary data in acute human experiments with insulin, several phenothiazines, barbiturates, and equanil, support the suggestion from rat data that the compounds used for sedation and tranquilization fall into two separate categories also; those drugs which have an immediate effect on the serum amino acid nitrogen, *e.g.*, insulin and the phenothiazines, and those which do not, *e.g.*, the barbiturates and equanil (see Table 7). This biochemical distinction may also be measured by the EEG. In concurrent EEG investigations by Henry and Obrist of these laboratories, which will be reported elsewhere, these workers have shown that equanil, when administered to humans in doses of 2 gms. or more, produces fast EEG activity indis-

TABLE 7

EFFECT OF SEVERAL DRUGS ON FASTING SERUM AMINO ACID NITROGEN

Drug	Amount	Number of cases	Time after injection (in hours) 0-1-2-3			
Chlorpromazine ..	50 mg. I.V.	10	4.6 ¹	4.3	4.0	3.7
Sch 3940	5 mg. I.M.	5	4.4	4.0	3.8	3.6
Sparine	50 mg. I.M.	1	4.7	4.6	4.4	4.1
Amytal	7.5 grains I.V.	1	4.8	5.0	4.9	4.8
Equanil	2 gms. (oral)	1	4.3	4.5	4.5	4.4

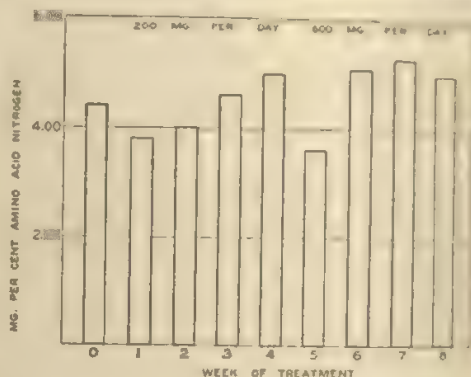
¹ Results in mg. % amino acid nitrogen.

CHART 2.—Effect of Chlorpromazine on serum amino acid nitrogen.

(Average of 20 cases)

tinguishable from that observed with barbiturates. The phenothiazines do not cause this type of fast EEG activity, nor does insulin in the presence of glucose. This is further evidence suggesting that these different classes of drugs exert their primary effects by influencing different physiological mechanisms.

EFFECTS OF CHRONIC ADMINISTRATION OF PHENOTHIAZINES ON SERUM AMINO ACIDS

In Chart 2 the effects of oral chlorpromazine given for a prolonged period on the level of amino acids in fasting serum are shown. The initial fall in level is soon more than compensated for by some type of "rebound reaction," but a fresh drop can be induced by elevating the level of the drug.

One possible explanation for the "rebound effect" may be as follows: chlorpromazine is known to promote the release of adrenalin from its storage places and eventually cause a deficiency in adrenalin by this means. If it is assumed that the effect of adrenalin on the concentration of serum amino acids is not blocked by the drug, one might anticipate a fall in amino acid level with the first administration (reflecting a temporary increase in blood adrenaline concentration) followed by an increased level of amino acids resulting from the depletion of adrenalin in the organism.

This observation may shed some light on the relative resistance to insulin by patients

receiving insulin coma treatment when the treatment is interrupted on weekends. For example, on Monday mornings the dose effective in producing coma on Friday frequently fails to induce coma. It may be postulated that insulin produces a release of adrenalin which antagonizes the effects of insulin in reducing blood sugar, but the effect becomes less significant as adrenalin stores are depleted.

Finally, observations on the amount of chlorpromazine required to produce a significant fall in serum amino acid nitrogen and the amount required to produce a clinical effect in previously untreated patients indicates that this biochemical measurement is a good index of whether or not sufficient drug has been administered. No significant effects are observed with less than 100 mg. a day orally, with consistent effects demonstrable at 200 mg. a day and above.

These results raise an interesting question. Do the changes in concentration of amino acids produce behavioral changes, or do they merely reflect the biochemical changes significant for the production of behavioral change? The experimental approach to this question is not simple because of the rigorous regulation of the concentration of amino acids in the nutritional milieu of brain by the blood-brain barrier. However, several different experimental approaches which may permit evaluation of the behavioral, the biochemical, and electroencephalographic effects of changed amino acid concentrations in spinal fluid in the absence of added drugs or hormones are planned.

BIBLIOGRAPHY

1. Sulman, F. G., and Winnek, H. Z. *Lancet*, 1: 161, 1956.
2. Shibresuma, K., Saito, S., Firkuda, M., *et al.*, *Endocrinol. (Japan)*: 2 (3), 189, 1955.

3. Hamburger, C. *Acta Endocrinologica*, 20: 4, 383, 1955.
4. Bourgeois-Gavarden, M., Nowell, W. K., Margolis, G., and Stephen, C. R. *Anesthesiology*, 16: 6, 829, 1955.
5. Stephen, C. R., Bourgeois-Gavarden, M., and Martin, R. C. *Am. N. Y. Acad. Sci.*, 61: 236, 1955.
6. Donnelly, J., and Gordon, M. W. *Regional Research Conference*, Philadelphia, November, 1956.
7. Luck, J. M., Griffin, A. C., Boer, G., and Wilson, M. J. *Biol. Chem.*, 206: 767, 1954.
8. Gaitonde, M. K., and Richter, D. *Proc. Roy. Soc., B*, 145: 83, 1956.

DISCUSSION

HAROLD E. HIMWICH, M. D. (Galesburg, Ill.)—Doctors Gordon, Zeller, and Donnelly have made an impressive discovery in regard to the effect of drug action on the amino acid nitrogen in serum and cerebrospinal fluid of human subjects. They have found that the phenothiazines, like insulin, lower the level of serum amino acids, while the barbiturates and meprobamate do not affect their level. They also report that meprobamate and the barbiturates induce fast waves in the EEG.

The authors point out that the fall of amino acid with the phenothiazines may be caused by an increased concentration of adrenaline available to the tissues because that drug promotes the release of adrenaline from its depots. In view of the fact that reserpine also releases adrenaline, it is desirable to determine whether or not amino acids also decrease with reserpine medication as a test for the adrenaline hypothesis.

The authors may believe that the action of insulin is not evoked by the adrenaline mechanism because it still occurs when glucose is given simultaneously with insulin. It is well known that insulin hypoglycemia evokes a raised level of adrenaline in the blood. But in all of their experiments some fall of blood sugar level was reported and that the levels observed need not necessarily have been the lowest attained. When the medullary portions of the adrenal glands of rabbits are destroyed, insulin fails to produce a decline of serum amino acid nitrogen. (*J. Biol. Chem.* 1934, 104, 207.)

What significance these results have for behavior is to be determined. The authors rightly point out, however, that multidisciplinary studies, like theirs, give the best opportunity for solving the most difficult problem of all, that of human behavior.

THE PHYSIOLOGIC BASIS OF THE MANIC-DEPRESSIVE ILLNESS: A THEORY¹

S. H. KRAINES, M.D.²

It has been generally agreed not only by clinicians like Kraepelin(1), who worked with patients in mental institutions, but also by investigators like Freud(2), who pioneered in psychodynamics of nonpsychotic patients, that a constitutional factor exists in the manic-depressive illness. It is also generally agreed that psychic factors play a major role in the symptom formation. However, psychiatrists differ as to the relative weight and significance of these physical and psychic factors in etiology, symptom formation, and therapeutic value.

It is the purpose of this paper to discuss the role of the physiologic factor in terms of etiology and mechanism.

That physical agents influence mood is common knowledge. Physical activities, drugs, organic diseases, experimental stimulation of the brain will elevate or depress the mood.

In the manic-depressive illness, extensive clinical experience indicates that:³

1. The onset occurs in the archetype form in the absence of precipitating or predisposing factors;

2. A consistent pattern (frequently cyclic) is followed by the illness, with a characteristic sine wave curve and fluctuations, despite highly dissimilar psychic backgrounds;

3. There is spontaneous recovery without psychotherapy;

4. Psychotherapy rarely shortens the illness and rarely prevents the recurrence of attacks;

5. A physical agent such as electric shock frequently produces recovery from an attack.

As in any disease process there are many deviations from the classical form; so in the manic-depressive illness there are many variations

in which psychic factors appear to be etiologic. In the classical archetype form, however, the onset, course, and termination strongly indicate a physiologic etiology. The depressive cycle may have an insidious or precipitous onset, and is characterized by fluctuations which are most intense in the middle zone (see Chart 1) and least in the lowest zone. The curve descends through phase 1 of boredom and dissatisfaction, through phase 2 with marked irritability and depression, into phase 3 of complete apathy and intense melancholia. Occasionally, agitation replaces apathy. Passing the nadir, the curve ascends through phase 4, still of apathy, into the intensely irritable and markedly fluctuating phase 5, thence into the terminal phase (6) where there is improved social adjustment despite a sense of inadequacy. The entire cycle has an average duration of 18 months, with variations from a few days to many years. The manic cycle is a mirror image of the above, but averaging 4 to 6 months in duration. The curve ascends through phase 1 of hypomania where the patient is usually regarded as normal though erratic, into phase 2 of manic excitement usually requiring hospital care, into phase 3 of delirious mania where there is danger of death from exhaustion. After the zenith, the patient descends through comparable phases to his normal level.

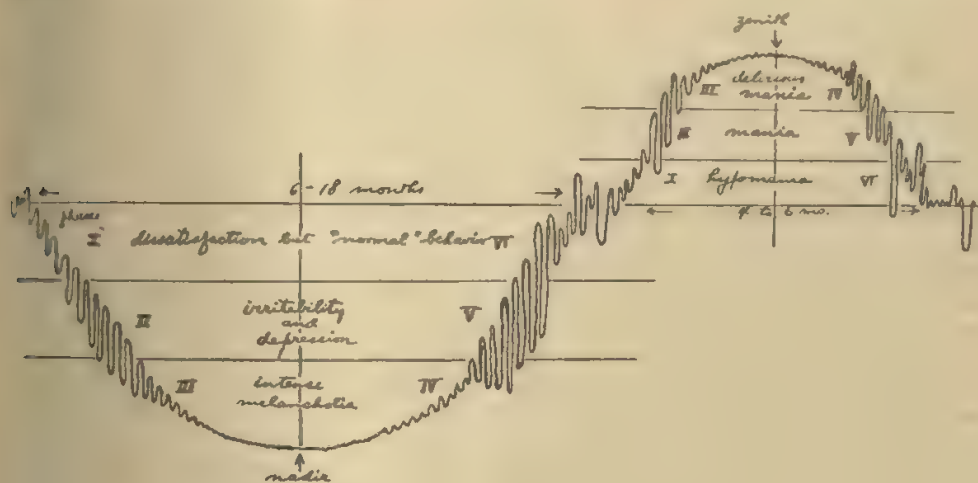
Some patients have mild depressive attacks which rarely dip below phase 1; many have mild hypomanic attacks which rarely climb above phase 1. A large number have only depressive attacks in their life time, and many have only one such attack. Others have alternating attacks of manic and depressive swings occurring at 6 month intervals. There are innumerable variations and combinations.

The pattern of these cycles, in the archetype form, is characteristic for most patients; the attacks are minimally modified by psychic trauma or psychotherapy; their entire pattern is that of a physical illness, with psychic overtones.

¹ Read at 112th annual meeting of The American Psychiatric Association, Chicago, Ill., April 30-May 4, 1956.

² Address: 30 N. Michigan Ave., Chicago 2, Ill.

³ Abstracted from Appendix I, *Mental Depressions and Their Treatment*. New York: Macmillan Co. 1957.



Fluctuations in the
Manic Depressive Cycle

CHART I.

Two additional factors support this thesis: hereditary susceptibility and endocrine imbalance. Numerous studies (Kraepelin (1), Banse(3), Rudin(4), Luxenburger(5), Lewis(6)) point to the significant influence of heredity in this disease. Kallman's(7) studies on identical twins show (and his figures are supported by those of other workers) that in the relatives of manic-depressive patients the incidence of the same illness in the parents is 24%, in the half siblings, 16.7%, in the full siblings 23%, in the dizygotic twins 26.3%, and in the monozygotic twins 95.7%.

SUMMARIZING TABLE OF HEREDITARY INCIDENCE OF MANIC-DEPRESSIVE ILLNESS

Combined figures for the relatives of patients show an incidence of 24% in the parents (Kallman); 16.7% in half siblings (Kallman); 23% in full siblings (Kallman, Rudin); 26.3% in dizygotic twins (Kallman), 16.4% in dizygotic twins (Rosanoff); 95.7% in monozygotic twins (Kallman); 69.6% in monozygotic twins (Rosanoff); 2.3% in cousins (Luxenburger); 3.4% in grandchildren (Luxenburger).

Hormonal factors in the etiology are indicated by the large number of manic-depres-

sive attacks following childbirth (Boyd(8)). Whereas psychic factors in pregnancy are undoubtedly of importance, the frequency of a background of hereditary susceptibility in these patients, the sudden onset of symptoms in the majority of patients shortly after childbirth despite the long presence of the psychic stresses, the occurrence of the illness after one pregnancy and not another, the subsequent recurrences unrelated to pregnancy; all indicate a physiologic factor. Almost 9% of all females who suffer from psychoses of various sorts develop their mental disorder in connection with pregnancy (Bellak(9)). The premenstrual intensification of symptoms, the relationship to the involutional period, and the preponderance of females over males in the ratio of 2 to 1 also emphasize the influence of hormonal changes in this illness.

The question arises, in view of this constitutional or physiologic factor, as to the site of the physiopathology. Since the symptomatology of the manic-depressive illness is psychic and psychosomatic, the central nervous system must be involved. The major organ systems of the brain include: 1. the extrapyramidal system; 2. the frontal lobes; 3. the rhinencephalic complex; 4. the cerebral cortex; 5. the diencephalon; and 6. the midbrain

reticular system. Analysis of the known functions of these systems provides significant clues. The extrapyramidal system which includes the basal ganglia and the cerebellum is primarily concerned with motor dysfunction, and disease of these areas (Parkinsonism, tumors) results in motor and not in primary mood disturbances. The frontal lobes, which anatomically and functionally are related to the rhinencephalon and the cerebral cortex, are described separately in terms of the popularity of "psychosurgery." Diseases of the frontal lobes (general paresis, encephalitis, tumors) are associated with minor personality changes and only secondarily with mood changes. Removal of the frontal lobes has little effect on the mood swings of psychotic patients, and minimal effect on the mood of other psychiatric patients. Tension and obsessive states are often relieved by section or ablation of the frontal lobes but the depressive or elated mood remains untouched.

The rhinencephalon (limbic system), originally considered a vestigial remnant of the olfactory system, has been shown by Papez(10) to be intimately involved in the emotional process. According to him "the hypothalamus, the anterior thalamic nucleus, the gyrus cinguli, the hippocampus and their connections constitute a harmonious mechanism which may elaborate the functions of central emotion, as well as participate in emotional expression." Kluver(11) in experiments on monkeys finds that surgical interference in this area results in emotional changes, and concludes that the hippocampus represents a "catalytic activator" basic for the proper functioning of affective and neocortical activities. Ward(12) finds that ablation of the anterior portion of the gyrus cinguli results in loss of fear. Pribram and Kruger(13) find that the amygdala and adjacent cortices are intimately related to emotional function. Fulton(14) concludes that the "orbito-insulo-temporo-cingulate complex is concerned with emotional expression, whereas lateral elements of the neopallium are primarily concerned with learning, memory, and intellectual functions." Since it appears, therefore, that the rhinencephalic complex is intimately associated with the

elaboration of emotion, it can be postulated as a physical site of manic-depressive illness.

The hypothalamus has at least 3 related functions. It is a major station of the autonomic nervous system, the posterior portion being strongly sympathetic, and the anterior portion being strongly parasympathetic (Gellhorn(15), Hess(16)), and in this way influences the visceral system. It also contains many nuclei which have specific functions: centers affecting glands of internal secretion, vasomotor centers, a temperature regulating center, a salt and water regulating mechanism, a sleep-waking center (Ranson(17)), and an appetite center (Kennedy(18), Anand and Brobeck(19)). In addition, sham rage and other peripheral expressions of emotion occur as a result of hypothalamic activity (Bard(20), Gibbs and Gibbs(21)). Several authors (Foerster, (22), Fulton(23)) have reported manic-like reactions when the hypothalamic area was manipulated during surgical procedures. The hypothalamus is thus a potential source of psychosomatic symptoms as well as of the expressions of emotion.

The thalamus (Chart 2) is primarily a receiving station for afferent impulses from the body and the external world. The medial lemnisci carry fibers of position sense; the spinothalamic tract transmits pain and temperature; the trigeminal tract mediates sensation from the face, all terminating in the thalamus. The optic and auditory fibers terminate in the meta-thalami (the lateral and medial geniculate bodies). Since emotion

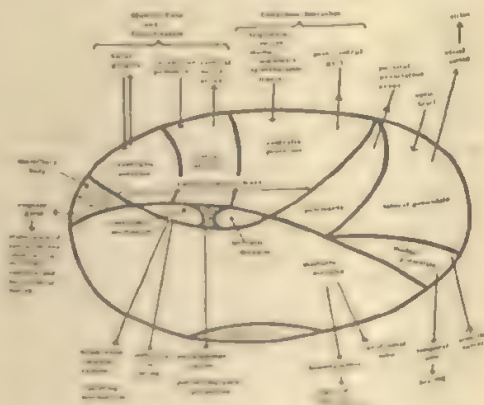


CHART 2.

is fundamentally dependent on sensory experience, a thalamic disturbance will be reflected in emotional disturbance. Moreover, many of the disturbances in sensation which manic-depressive patients experience, such as paresthesias, blurring of vision, disturbances in hearing, changes in taste, disturbance in the sense of balance will also result if there is a disturbance in thalamic function.

Consciousness ranges from a physical condition of simple alertness, at one extreme, to highly complex psychic awareness, at the other. The consciousness of the decorticated animal is little more than physical alertness: the consciousness of the normal animal permits him to remember and choose his responses. Penfield (24) has ably described the continuation of consciousness no matter how large an area of the brain is destroyed as long as the central core of the brain (the centrencephalon) remains intact. Magoun (25) and others have demonstrated that the reticular system in the upper brain stem is intimately related to this state of awareness, and that the activity of this reticular system is essential in the maintenance of consciousness. Consciousness, in these terms, applies to the physical level of alertness, a highly organized stimulus-response mechanism. Such "alertness" is a prerequisite for but not identical with man's intellectual and emotional appreciation of stimuli. Once this state of alertness is achieved, then the cerebral cortex can begin to supply the content of consciousness; should the reticular system function inadequately, there would be a "clouding" of consciousness. Manic-depressive patients complain often of "being in a daze," of "things being unclear," of "decreased alertness." Concentration is difficult with decreased alertness and attentiveness.

It follows that a physiologic (and reversible) dysfunction in the diencephalic area (the hypothalamus, the thalamus, the rhinencephalon, and the reticular system) (Chart 3) can account for most of the symptoms found in the manic-depressive illness. The psychosomatic symptoms and the peripheral manifestations of emotional disturbance could result from hypothalamic dysfunction; the alteration in sensory experience

on the thalamic level would explain many of the sensory disturbances found in these patients, and would also explain the alteration in the emotional experience which is dependent on physical sensation. A disturbed function in the rhinencephalon, which appears to act as an emotion elaborating mechanism integrating the diencephalic reactions with the cerebral cortex, would result in further distortion of the emotions. A change in the activity of the reticular system would bring about an impairment of consciousness and an alteration in the degree of alertness and energy output with which the cerebral cortex can respond to stimuli.

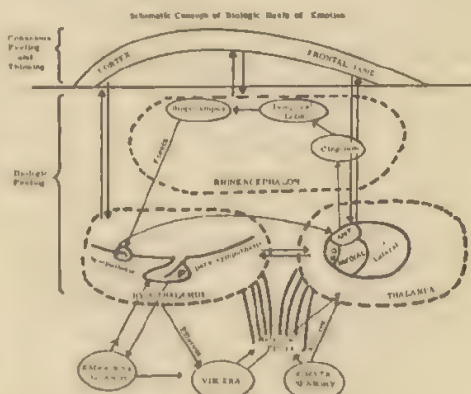


CHART 3.

Schematic Concept of Biologic Basis of Emotion

Interceptive (visceral) and exteroceptive stimuli (somatic sensory) arrive in the thalamus (lateral nuclear masses and the geniculate bodies). These stimuli, integrated in the thalamus, pass a. directly to the cerebral cortex, b. directly to the hypothalamus, and c. via the rhinencephalon (limbic system) (cingular gyri, hippocampus) to the mammillary body (M), and to the cerebral cortex. The hypothalamus manifests the physical signs of emotion (dilated pupils, hypertension, spasm of smooth muscle, etc.) directly through the autonomic nervous system and indirectly via the pituitary. The cerebral cortex becomes "aware" of the specific nature of the stimuli. The rhinencephalon acts as a reverberating neuronal mechanism elaborating the sensory stimuli into the quality of "emotion" on a biologic level, the cerebral cortex, interacting with the rhinencephalon, is the seat of the "conscious" quality of emotion. Psychodynamic mechanisms, with their physical basis in the cerebral cortex, but governed by relatively independent principles, derive their emotional quality from the activity of the diencephalic area. The reticular system acts as a non-specific "alerting" mechanism for the cerebral cortex.

The role of the cerebral cortex in the manic-depressive states remains to be examined. In terms of specific functions such as mediated by the post central gyri, the visual and auditory cortices, the precentral gyri and Broca's area, the cerebral cortex is not involved since these cortical functions remain intact. In terms of purely intellectual functions such as are involved in memory, orientation, ability to calculate, etc., the cortex is not primarily involved. In physical diseases of the cerebral cortex whether they be of the infectious variety or a result of abiotrophy and sclerosis, manic-depressive reactions are secondary if they occur at all. The preponderance of evidence would seem to indicate that the cerebral cortex is not primarily disturbed and consequently is not the primary site of the manic-depressive illness.

The cerebral cortex is, however, secondarily involved. Dependent upon stimulation from the lower centers in the diencephalic area, the cerebral cortex suffers from an inadequate alerting by the diseased reticular system and receives unusual stimulation from the disturbed function of the thalamus. In consequence, the distorted intero- and exteroceptive sensations which are perceived in consciousness appear different from usual. This alteration in sensation creates a state of alarm which is then expressed as the "free-floating" anxiety so characteristic of manic-depressive patients.

Once the cerebral cortex is so stimulated, psychodynamic laws begin to operate; and such psychologic mechanisms as rationalization, repression, and projection bring about a host of symptoms which vary from patient to patient. Consequently, latent feelings of guilt, rationalizations as to cause, symbolic expressions by various phobias, and vague projection phenomena may occur. It must be emphasized, however, that these psychodynamic reactions which draw their material from the patient's past experiences and his patterns of reactions, are secondary reactions, secondary to the physiologic disturbance of the diencephalon-rhinencephalon-reticular system.

Clinically, in the archetype form, the intensity of the symptoms follows a sine wave

pattern, with many superimposed fluctuations. As the physiopathology intensifies, so do the symptoms; after the nadir of the depression (or the zenith of the manic state) has been passed and the spontaneous and self limiting disease process begins to improve, so also do the symptoms.

In the days before modern psychiatric procedures, these patients would be hospitalized and with only palliative therapy there would be, in the vast majority of patients, a spontaneous recovery in 6 to 18 months. The psychiatric approach today has a two-fold purpose: 1. physiologically to assist in the recovery from the disease process, primarily by the use of some of the newer drugs and by electric shock therapy; and 2. by means of psychotherapy to enable the patient not only to dispel the secondary psychopathology, but also to help him remove the distortions of his premorbid personality.

SUMMARY

Clinical experience and studies of heredity indicate that the etiology of the manic-depressive illness is physiologic. Examination of the possible sites of the physiopathology implicates diencephalic-rhinencephalic-reticular brain systems. It is the secondary involvement of the cerebral cortex that results in psychopathology. Psychodynamic mechanisms use the patient's experiences and reaction patterns in the formation of symptoms. As the physiopathology spontaneously improves, so do the symptoms.

BIBLIOGRAPHY

1. Kraepelin, E. *Manic-Depressive Insanity and Paranoia*. Ed. by E. & S. Livingstone. Edinburgh: G. M. Robinson, 1921.
2. Freud, S. *Mourning and Melancholia*, *Collected Papers*. Vol. 4. London: The Hogarth Press, 1925.
3. Banse, J. *Ztschr. f. d. ges. Neurol. U. Psychiat.*, 119: 576, 1929.
4. Rudin, E. *Ztschr. f. d. ges. Neurol. U. Psychiat.*, 108: 274, 1927.
5. Luxenburger, H. *Fortschrift Neurol. U. Psychiat.*, 10: 44, 1938.
6. Lewis, A. *The Chances of Morbid Inheritance*. Ed. by C. P. Blacker, London: H. K. Lewis, 1934.
7. Kallman, F. J. *The Genetics of Psychoses*. Vol. 6, Paris: Herman and Cie, 1950.
8. Boyd, D. A. *Am. J. Obst. and Gynec.*, 43: 148, 335, 1942.

9. Pellak, L. Manic-Depressive Psychoses and Allied Conditions. New York: Grune and Stratton, 1952.
10. Papez, J. W. Arch. Neurol. and Psychiat., 38: 725, 1937.
11. Klüver, H. Lancet, 72: 567, 1952.
12. Ward, A. A. J. Neurophysiol., 11: 13, 1948.
13. Pribram, K. H., and Kruger, L. Ann. New York Acad. Sc., 58: 109, 1954.
14. Fulton, J. F. Frontal Lobotomy and Affective Behavior. New York: W. W. Norton & Co., 1951.
15. Gellhorn, E. Autonomic Regulations. New York: Interscience Publ., 1943.
16. Hess, W. R. Diencephalon. New York: Grune and Stratton, 1954.
17. Ranson, S. W. Arch. Neurol. and Psychiat., 41: 1, 1939.
18. Kennedy, G. C. Proc. Roy. Soc. London, 137: 535, 1950.
19. Anand, B. K., and Brobeck, J. Proc. Soc. Exper. Biol. and Med., 77: 323, 1951.
20. Bard, P. Assn. Research Nerv. and Ment. Dis. Proc., 19: 190, 1939.
21. Gibbs, E. L., and Gibbs, F. A. J. Comp. Neurol., 64: 209, 1936.
22. Foerster, O., and Gagel, O. Ztschr. f. d. ges. Neurol. U. Psychiat., 149: 312, 1933.
23. Fulton, J. F. Physiology of the Nervous system. New York: Oxford Press, 1949.
24. Penfield, W. Trans. Amer. Neurol. Assn., 76: 15, 1951.
25. Magoun, H. W. Brain mechanisms and consciousness, Springfield, Ill.: C. C. Thomas, 1954.

STUDIES IN HUMAN ECOLOGY

FACTORS RELEVANT TO THE OCCURRENCE OF BODILY ILLNESS AND DISTURBANCES IN MOOD, THOUGHT AND BEHAVIOR IN THREE HOMOGENEOUS POPULATION GROUPS¹

LAWRENCE E. HINKLE, JR., M.D., NORMAN PLUMMER, M.D., RHODA METRAUX, PH.D.,
PETER RICHTER, M.D., JOHN W. GITTINGER, M.A., WILLIAM N. THETFORD, PH.D.,
ADRIAN M. OSTFELD, M.D., FRANCIS D. KANE, M.D., LEO GOLDBERGER, M.A.,
WILLIAM E. MITCHELL, M.A., HOPE LEICHTER, M.A., RUTH PINSKY, M.A., DAVID
GOEBEL, M.D., IRWIN D. J. BROSS, PH.D., AND HAROLD G. WOLFF, M.D.²

This is an initial summary of the findings from 3 studies which have been carried out during the past 5 years. Two have been completed; the third is still in progress. Twenty-four investigators from the fields of internal medicine, psychiatry, psychology, sociology, cultural anthropology, and medical statistics have taken part in these investigations with the technical assistance of 8 others. The 3 population groups which have been studied provided a total of 2924 individuals upon which the general conclusions are based.

These studies were designed to investigate the influence which man's relation to his social environment has upon his health. They are based upon the premise that in a group of people unselected with regard to health, and essentially equal with regard to the various factors known to affect health, each individual's relation to his own life situation is an outstanding variable. In such a group, a study of the relationship between this variable and the state of health of the individual members is facilitated. It is not possible, of course, to obtain any group of human beings which is literally homogeneous with regard to all of the various factors which may affect the health of its members. One can, however, find groups which closely approach homogeneity with regard to the major factors, and in which the minor and unrecognized factors are presumably scattered at random, thus minimizing the influence of these variables as compared to the variable under study.

Among the major factors that are known to have an effect upon the health of humans are age, sex, genetic inheritance, constitution, the effects of previous disease processes, cultural background, socio-economic status (with all that this implies in terms of diet, housing, etc.), occupation, the general physical environment, and the opportunities for encountering the external causative agents relevant to disease. We have studied 3 groups, each quite different from the other 2, and each remarkably homogeneous with regard to most of these factors. The genetic inheritance and constitution of individual members, of course, cannot be controlled; but the effect of this and other variables can be assessed to some extent by a consideration of the individual case material, as will be described later.

The characteristics of these 3 groups are outlined in Table 1. There were independent and complete records of all the periods of disability, and of the nature of all illnesses, which had occurred in the adult lives of the members of the two American groups, both of which were employed by a corporation that kept meticulous records of its employees' health and attendance. In the Chinese group we were forced to rely upon the medical histories given by the informants, their descriptions of the symptomatic manifestations of their illnesses, and the results of physical examinations and diagnostic tests, in order to obtain our information about their health. Information obtained in this manner from the American informants, when compared with that obtained independently from their records, was found to be reliable, and it is our belief that we have a reliable estimate of the health of our Chinese informants.

In the 2 American groups the following

¹ Read at the 112th annual meeting of The American Psychiatric Association, Chicago, Ill., April 30-May 4, 1956.

² From the Study Program in Human Health and the Ecology of Man of the Department of Medicine and Psychiatry, New York Hospital—Cornell Medical Center, New York, N. Y.

TABLE 1

CHARACTERISTICS OF THE THREE GROUPS

	Group I	Group II	Group III
1. Total number studied.....	1297	1527	100
2. Number studied intensively.....	336	279	100
3. Age	17-50	17-55	19-72
4. Sex	Women	Men	Men and women
5. Cultural background	2nd Generation Irish and Italian American	Mixed indigenous American	Chinese
6. Socio-economic background.....	Upper-lower class	Lower-middle class	Upper class
7. Education	Grammar school	High school	College
8. Occupation	Unskilled white-collar	Skilled workmen	Graduate students pro- fessional men
9. Lifetime environment	Metropolitan New York	Metropolitan New York	Various parts of China (Later United States)
10. Sanitation of general sur- roundings	Generally high	Generally high	Generally very low
11. Exposure to pathogens and trauma	Low	Moderate	High
12. Physical deprivations, pres- sures and dislocations	Few	Few	Many
13. Social dislocations and situ- ations of uncertainty	Few	Few	Many

investigative procedure was used: the initial group was made up of all people employed in the same type of work in a division of a corporation in a large city—approximately 1,800 men in one case and approximately 1,700 women in the other. From these initial groups there were excluded all those for whom complete records were not available, leaving 1,527 men and 1,297 women. These larger groups were used for statistical studies of the distribution sickness disability and the occurrence of various illnesses among their members, over a number of years.

There were many women and men who had been observed continuously for 20 years or more. All of these women (336) and one-third of the men (279) were studied intensively, using statistical methods. When the distribution of illness over a 20-year period in these 2 smaller groups had been obtained, the 20 in each group who had been disabled for the greatest number of days, and the 20 disabled for the smallest number of days, were identified. The records of these 40, and those of many others selected at random from the middle range of each group, were examined carefully to ascertain the nature of the illness episodes which had been experienced. The informants, themselves, were interviewed by an investigator who obtained from them a complete medical history, and carried out a physical and psychiatric ex-

amination, as well as additional diagnostic procedures if any were necessary in order to complete his understanding of the case. At the same time, a life history was obtained covering the pertinent aspects of the early development and later life experiences of the informant.

A somewhat different procedure was used with the Chinese. All members of this group of 100, selected at random from a larger group of approximately 5,000 Chinese graduate students and professional men, were studied intensively for a total of 16 hours. Four hours of this were spent with an internist, 4 hours with a psychiatrist, 4 hours with a cultural anthropologist and sociologist, and 4 hours with a clinical psychologist, who administered a battery of tests including the Wechsler-Bellevue Intelligence Scale, Form I, the Rorschach Test, the Lowenfeld Mosaic, a Projective Questionnaire, the Sacks Sentence Completions, the Thurstone Temperament Scale, and Human Figure Drawings. The TAT was given to about 30 of the informants also.

Sickness disability was not distributed at random among the members of any of these groups. In each group there were many members who had more illness, and many who had less illness, than would be expected if chance alone were the determining factor. In the group of American men, upon whom

the statistical studies are most complete, the distribution of sickness episodes closely approximates the negative binomial distribution—a distribution which is based upon the assumption that some factor in addition to chance determines the occurrence of such episodes. In this group, approximately 10 percent of the men show a statistical "risk" of becoming ill which is at least twice as great as the average "risk" for the group, and another 10 percent show a correspondingly smaller "risk" (Fig. 1). The general effect of this skewed distribution of illness is that approximately one-fourth of the individuals experienced more than half of all the illnesses and upwards of 75 percent of the total days disability.

Our general inference from this finding is that, in all of these groups, some factor other than chance determines the occurrence of sickness in the individual members. Since this appears to be a consistent finding, we suspect that the same phenomenon occurs in the population at large.

An investigation of the nature of the illnesses experienced by the various members of each group revealed that in all 3 groups, those who had the greatest amount of sickness disability had experienced a wide variety of illnesses of various types, and various etiologies, involving a number of body systems. While one or two recurrent or chronic illnesses might predominate in the sickness pattern of an individual, it was a universal finding that those who had a great many episodes of illness, and a great many days of total disability, experienced illnesses involv-

ing a number of body systems. This is illustrated in Fig. 2, from the study of the American men, in which the number of illnesses experienced by each informant is plotted against the number of body systems involved. As the amount of illness experienced by each informant increases, the number of involved body systems increases.

There appears to be a similar relationship between bodily illnesses and disturbances of mood, thought, and behavior. Figure 3, taken from the study of the Chinese, illustrates this. Those having the greater number of bodily illnesses, regardless of their nature or etiology, in general, experience a greater number of disturbances of mood, thought, and behavior.

Between major and minor illnesses, the same type of relationship appears to hold. In each group, those experiencing the greater number of minor illnesses in general experience the greater number of major illnesses. Usually it was found that major illnesses involved the same body systems most frequently involved in minor illnesses. For example, individuals having a great many colds appear to be more likely to have an episode of pneumonia, and those having many minor disturbances of mood, thought, or behavior appear to be more likely to have major disabling illnesses in this category. But major illnesses may appear in other body systems also; the general relationship is shown in Fig. 4 which is taken from the study of the American men.

An example of the illnesses experienced by a frequently ill informant is shown in Table 2. This American working woman was selected for intensive study because she had had 1,041 days of sickness disability over a period of 35 years.

Our general inferences from the foregoing findings are that humans, when they move from a state of "health" into a state of "sickness" are likely to manifest disturbances of function and pathological processes involving a number of body systems. If illness persists long enough, it is likely to be manifested by disturbances in a majority of body systems, as well as by disturbances of mood, thought, and behavior. We infer that whatever factors are responsible for this operate upon man as a whole and influence illnesses

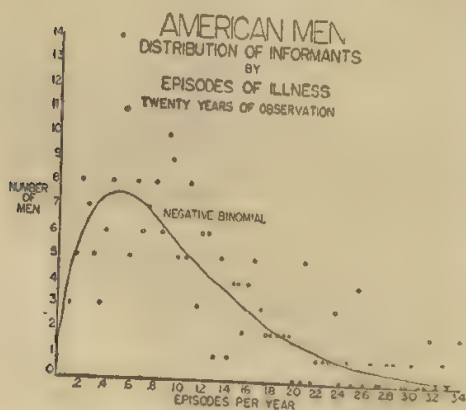


FIG. 1

TABLE 2

AN "ILL" AMERICAN WORKING WOMAN: ILLNESSES EXPERIENCED FROM AGE 16 TO AGE 51

"Body system"	Syndrome	Episodes of disability
1. Respiratory system	<i>Influenza</i>	1
	<i>Pertussis</i>	1
	Minor upper respiratory infections	(Approx.) 44
	Severe tonsillitis	2
2. Gastrointestinal system	<i>Cholecystitis and cholelithiasis</i>	2
	<i>Diaphragmatic hernia</i>	5
	Duodenal diverticulum	0
	Postoperative biliary symptoms	4
	Mucous colitis	4
	Infectious gastroenteritis	3
	(Chronic, nondisabling constipation, low abdominal pain, "gas," and nausea, present for many years)	
3. Cardiovascular system	<i>Essential hypertension</i>	0
4. Genital system	<i>Myomata of uterus</i>	1
	Dysmenorrhea (chronic)	
	Postmenopausal flushes, severe	
5. Urinary system	<i>Pyelonephritis</i>	1
	Cystitis	1
6. Blood	<i>Hypochromic anemia</i>	
7. Musculoskeletal system	"Low back pain"	4
	Osteoarthritis	1
8. Head	Vascular headaches	2
	(Nondisabling headaches occurred about once a month)....	
9. Ears	Otitis Media	2
	Ménière's syndrome	1
10. Eyes	Conjunctivitis	1
11. Teeth	Dental caries	3
	(Total extractions)	
12. Skin	Urticaria	2
	Cellulitis	1
13. Breast	<i>Fibroma</i>	1
14. Metabolic	Obesity	
15. Mood, thought, behavior	Moderately severe depressions	3
	Anxiety-tension states	5
	(Symptoms of anxiety, tension, depression chronically present)	
Accidents	Contusions	8
	Lacerations	3
	Sprains	1
Operations	1. <i>Cholecystectomy</i>	
	2. <i>Hysterectomy and oophorectomy</i>	
	3. <i>Excision of fibroma of breast</i>	
	4. <i>Total dental extractions</i>	
Summary		
Total days disabled		1041
Disabling episodes of illness		95
"Major" illnesses		9
Disabling disturbances of mood, thought, and behavior		8
"Body systems" involved		15
Accidents		12
Operations		4

AMERICAN MEN

NUMBER OF BODY SYSTEMS INVOLVED vs. TOTAL ILLNESSES

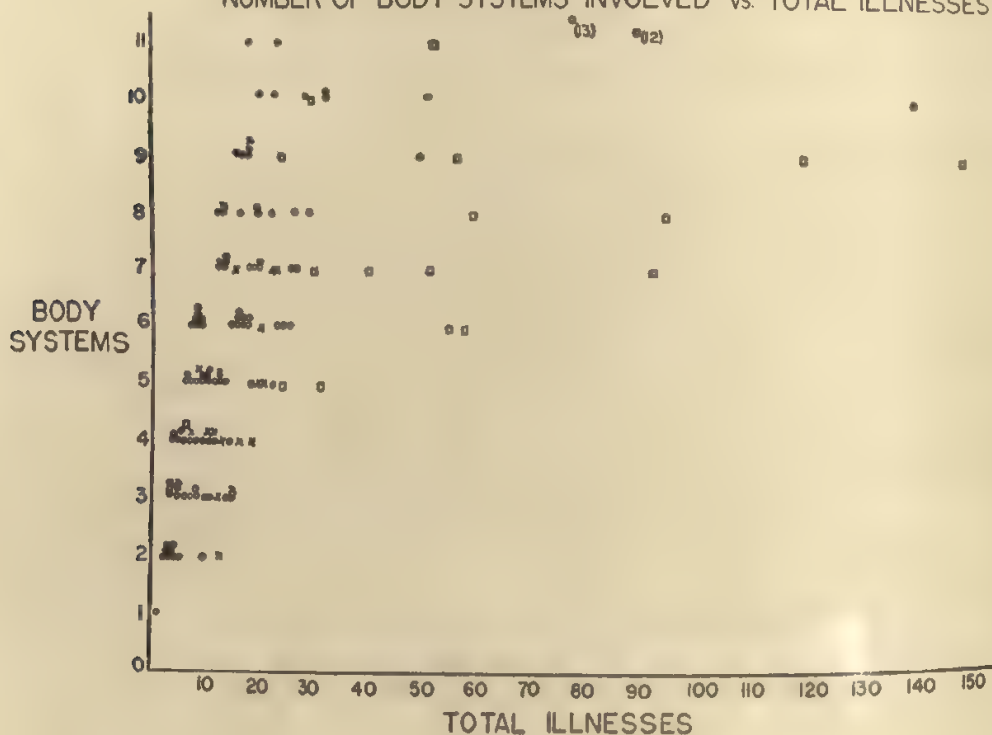


FIG. 2

100 ADULT CHINESE

DISORDERS OF MOOD, THOUGHT AND BEHAVIOR vs. TOTAL ILLNESSES

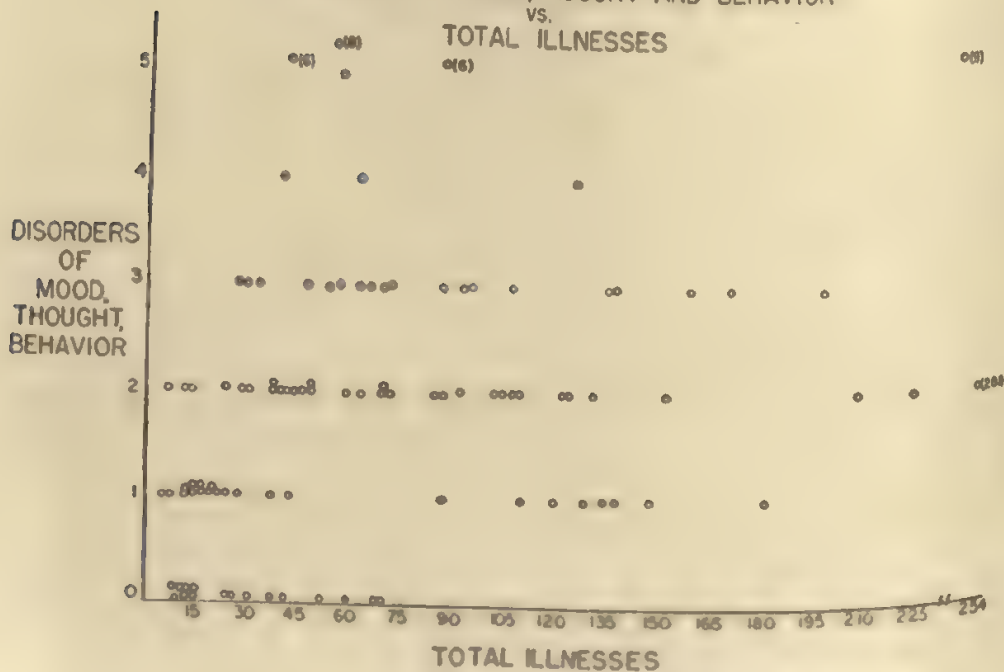


FIG. 3

AMERICAN MEN

MAJOR vs. MINOR ILLNESSES

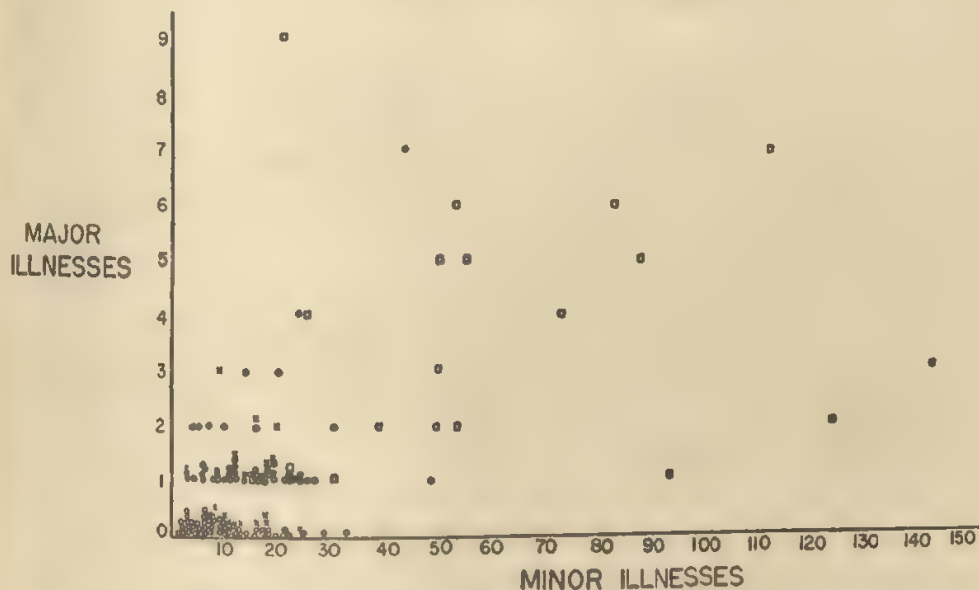


FIG. 4

regardless of their nature or etiology. They evidently influence irreversible pathological processes as well as reversible disturbances of function, and diseases which are potentially fatal as well as those which are usually transient and relatively harmless. They influence the occurrence of disturbances of mood, thought, and behavior and the occurrence of bodily illnesses in a roughly parallel manner. The relation between these two categories of illness thus appears to be one of general parallelism. As a group, those who have more of one are likely to have more of the other.

When the distribution of illness in the lives of our informants was studied, it was found that sickness episodes frequently appeared in clusters; usually they were not distributed at random throughout a lifetime. Typically, an informant would have periods of relatively good health, alternating with several years during which he would have a number of illnesses of a variety of etiologies and involving several body systems, running consecutively or concurrently. This is a common phenomenon in all 3 groups, and it ap-

pears to be uniformly distributed in each. It occurs among those who have small and intermediate amounts of illness as well as among those who have many illnesses. Some illnesses and accidents do, of course, appear as isolated phenomena; but most illnesses seem to occur in clusters. An example of this is shown in Fig. 5 taken from the study of the Chinese.

From this phenomenon of "clustering," we infer that whatever factors are operating to affect the general susceptibility of our informants to illness do not exert a constant influence at all times. Their effect is greater at some times, and less at others. There is no predictable period of life when such clusters appear, and they have no consistent duration or magnitude. From this we infer that these factors probably arise out of some changing and unpredictable relationship between each individual and his environment.

By correlating events and situations in the life histories of our informants with the occurrence of clusters of illness, we have attempted to ascertain what consistent features of the individual's relationship to his envi-

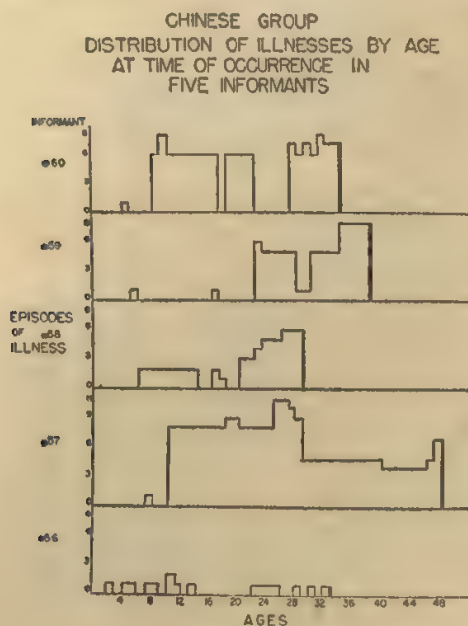


FIG. 5

ronment might be associated with fluctuations in his general health. So far as we have been able to determine, physical hardship, geographic and climatic change, and changing exposures to toxic or infectious agents, are not the significant variables. Only occasionally does it appear that the development of an isolated illness, or a cluster of illnesses, is simply the result of some fortuitous encounter with bacteria, trauma, or other influences arising from the physical environment. Genetic inheritance and constitutional endowment undoubtedly play a role in general susceptibility to illness, and probably have an important influence upon the total sickness experienced by an individual throughout his life. But the data in general suggest that, as compared to the effects of the life situation, these factors are relatively unimportant in determining the distribution of illness in any of the groups. In any case, it is difficult to invoke them as an explanation of the clustering of illness at special times in the lives of individual informants.

We find that clusters of illness usually are associated with periods when an individual is attempting to adapt to a difficult life situation (Figs. 6 and 7). That is to say, such clusters commonly occur during periods of demonstrable conflict with parents, siblings,

or spouse, threat to social position, loss of significant supports, or excessive demands created by the sickness or aggressive behavior of other members of the family, employers, associates, and so on. Such observable difficulties in the relationship to the social environment are usually directly stated by the informants to be difficult or unpleasant, with a detailed description of why they are difficult and with appropriate feelings. From such data alone it is possible to say that, in each of these informant groups, the relationship of the informants to their social environment has an important influence upon the occurrence of clusters of illness, and that it is much more consistently related to this than any other factors which have been considered. But the correlation between clusters of illness and such "objective" evidences of difficult life situations is by no means complete. There are a great many instances of informants existing in what are objectively "difficult life situations," with no observable evidence of illness; and, conversely, there are many other instances in which clusters of illness appeared in the lives of informants at times when they were existing in what objectively appear to be benign life situations.

It is axiomatic that man does not react to his environment as it is "objectively" perceived by other people; rather he reacts to it, as he, himself, perceives it in terms of his own needs and aspirations (using "perceive" to include both conscious and unconscious processes). There is no way to ascertain how a man perceives his life situation without using his own subjective impressions, or the inferences of an observer, or both. Information obtained in this manner is always biased by the attitudes of the informant, and is very likely to be biased by those of the observer. Such information, therefore, does not lend itself to being counted or quantified in a mathematical fashion. On the other hand, the observer can validly state his inferences and present the original case material upon which these inferences are based. It has been the general inference of all of the observers who have participated in these studies that the great majority of the clusters of illness which have occurred in the lives of our informants have occurred during life situations which the informant himself perceived as stressful, even though this situation might

CHINESE STUDY

ILLNESSES EXPERIENCED BY ONE INFORMANT

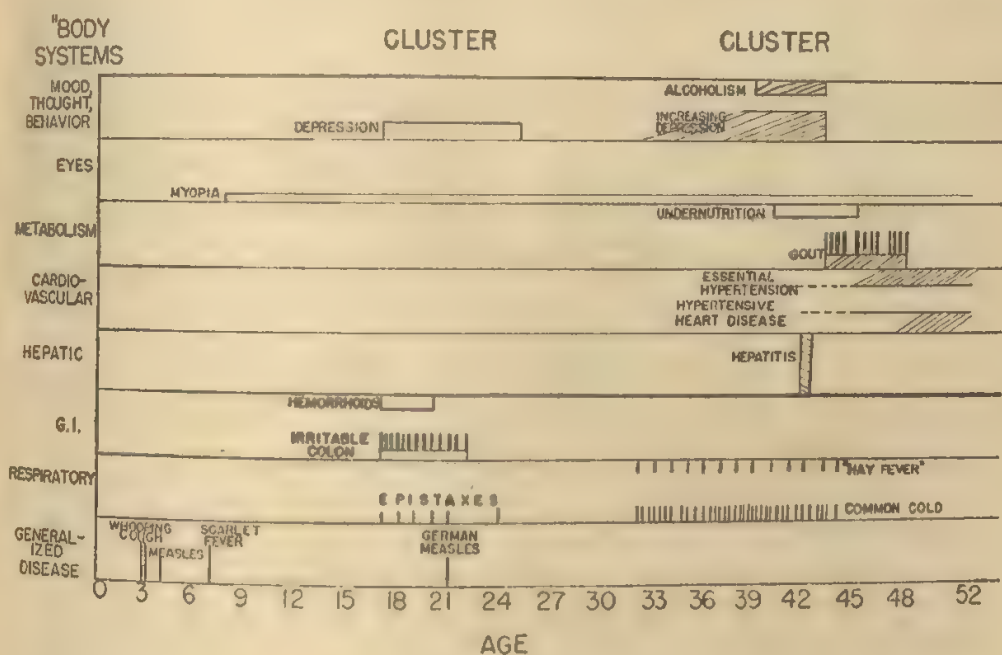


FIG. 6

CHINESE STUDY

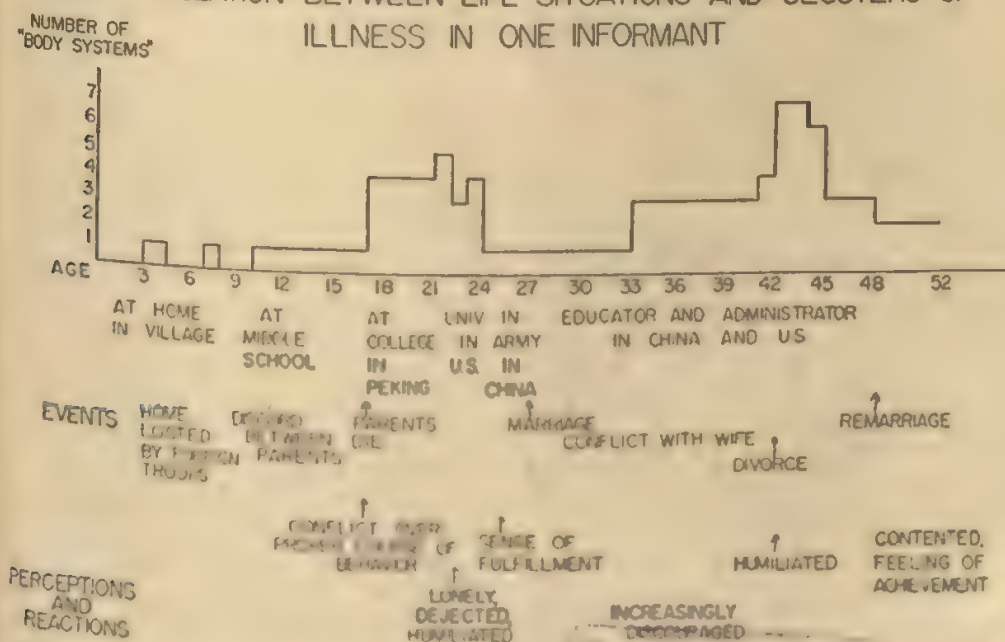
RELATION BETWEEN LIFE SITUATIONS AND CLUSTERS OF
ILLNESS IN ONE INFORMANT

FIG. 7

appear benign to an "objective" observer; conversely, when "objectively" difficult life situations are not associated with illness the informants usually did not perceive these life situations as difficult, even though the observer might expect them to do so. This was a consistent observation among the informants in all of the groups, regardless of their general state of health.

CONCLUSION

Our inferences from our studies are these: man's relation to his social environment as

perceived by him has a profound effect upon his general health. It influences the development and progression of all forms of illness, regardless of their nature, and regardless of the influence of other etiological factors. Its effect often far outweighs the influence of changes in the physical environment and the effects of random exposure to pathogenic or noxious agents. As a group, those who are experiencing difficulty in adapting to their social environment have a disproportionate amount of all of the illness which occurs among the adult population.

SOME INTERRELATIONS OF SOCIAL FACTORS AND CLINICAL DIAGNOSIS IN ATTEMPTED SUICIDE: A STUDY OF 109 PATIENTS¹

ELI ROBINS, M.D., EDWIN H. SCHMIDT, M.D., AND PATRICIA O'NEAL, M.D.²

As part of a study of attempted suicide(1), the social difficulties described by these patients who had attempted suicide were investigated by direct interview of the patients. A high prevalence of such difficulties was found, as has been reported in other studies of attempted suicide(2, 3, 4). The emphasis in this study has been on investigating the interrelations between the diagnosis in a given patient and the social difficulties which he reported. The diagnostic groups studied were compared with regard to the prevalence of broken homes from which they came, suicide in their families, adequacy of the patient's past and present social adjustment, the social stresses to which the patients had been subjected just prior to the suicide attempt, and the social context of the suicide attempt itself, i.e., the content and nature of his emotional state at the time, the main reason he gave for making the attempt, and whether the patient was alone at the time of the attempt.

This comparison by diagnostic groups revealed important differences in these factors between the patients with manic-depressive psychosis on the one hand and those with chronic alcoholism, conversion reaction, or sociopathic personality on the other hand. Other findings were the complete absence of any patient who was psychiatrically well (normal) prior to his attempt and the complete absence of any patient with an anxiety reaction. These findings will be discussed with regard to the interaction between social difficulties and a clinical psychiatric illness in leading to suicide attempts.

METHOD OF STUDY

Our observations were made on 109 patients who were brought to a large general

¹ Read at the 112th annual meeting of The American Psychiatric Association, Chicago, Ill., April 30-May 4, 1956.

² From the department of psychiatry and neurology, Washington University School of Medicine, St. Louis, and the St. Louis City Hospital (Malcolm A. Bliss Psychopathic Institute).

hospital immediately after having made a suicide attempt. The method of selecting the patients, the method of obtaining data about them, the diagnostic criteria, and the authors' evaluation of the seriousness of the suicide attempt have been described in detail(1). All patients were examined by means of an open-ended questionnaire which covered past and present medical history, details about the suicide attempt, and a personal and social history. The personal and social history included information concerning the parental home, school history, work history, income, change of residence, marital history, legal difficulties, arrests, drinking history, military service, and the nature of the patient's relationships with family members, friends, and job associates. Social factors in the suicide attempt itself were investigated by means of inquiries concerning the "main reason" the patient made the attempt, possible disturbing events and symptoms occurring prior to the attempt, and the patient's emotional reaction at the time of the suicide attempt. (See questions 1 through 49 in a previous paper(1).)

In this report, a detailed comparison of 86 patients in 5 diagnostic categories—manic-depressive depression, chronic alcoholism, conversion reaction (hysteria), sociopathic personality (psychopathic personality), and patients in whom a definite diagnosis was not made, the undiagnosed group—is presented. Manic-depressive depression in this study includes involutional melancholia and psychotic depressive reaction, i.e., manic-depressive depression will be used even if the patient did not have a prior psychotic depression or manic episode(1). There are 23 patients who will not be discussed in detail. Of these 23 patients, 8 (those with acute brain syndrome and chronic brain syndrome) have already been discussed in a study of attempted suicide in old age(5). The remaining 15 patients included 6 with schizophrenia, 3 with drug addiction, and 6 patients with other psychi-

atric diseases(1). These latter diagnostic groups were omitted because they each contained too few patients for statistical treatment.

Patients whose symptoms, course, and signs did not allow an unequivocal diagnosis to be made were placed in the undiagnosed group. A question considered here was whether any of the 21 patients in the undiagnosed group had been clinically well (normal) until shortly before the suicide attempt.

This paper will consider the interaction of social factors with clinical diagnosis in patients who attempt suicide. In dealing with this interaction it was convenient to describe separately: 1. the extrinsic social difficulties which the patients experienced during their lives and just before the suicide attempt, and 2. their emotional state for some time prior to and immediately before the suicide attempt. The first category concerns the presence or absence of objective and extrinsic social difficulties. These socially oriented difficulties include (a) problems in on-going personal relationships because of friction involving spouse, family, friends, or fellow workers, (b) inability to meet normal social demands as evidenced by financial dependency, job instability, legal difficulties, and excessive drinking, and (c) the response to the death of a person important in the patient's life. The second category concerns the emotional state (feelings) reported by the patients. These feelings were classified in 2 ways: (a) feelings about self, such as depression, disgust with self, and worthlessness, and (b) feelings directed towards other persons, such as anger, spite, frustration in

a personal relationship, and a desire to gain attention. This distinction between feelings about self and feelings directed towards others and between the presence and absence of socially oriented difficulties is not meant to imply that a particular behavior or emotional state, *e.g.*, excessive marital friction or feelings of depression, is primarily a reaction to the patient's social environment independent of psychiatric illness or primarily a symptom of his psychiatric illness.

Statistical methods used have been described(1). A significance ratio of 2.0 or greater, corresponding to odds of about 20 to 1, was accepted as being statistically significant.

RESULTS

General Characteristics of the Entire Group (Table 1).—The 86 patients who will be discussed were in 5 different diagnostic groups. There were differences in the sex distribution and average ages in each diagnostic group (Table 1). At least 85% of the patients in each diagnostic group had completed the 6th grade. In the undiagnosed group 33% had graduated from high school, as compared with 5 to 12% in the other groups. In general, the current marital status of the groups did not differ appreciably except that there were fewer separations (3%) and divorces (0%) and more widows and widowers (25%) in the manic-depressive group. In the entire group of 86 patients, 52% were married, 15% had never married, 18% were separated, 8% were divorced, and 7% were widowed.

TABLE 1
AGE, SEX, AND DIAGNOSIS OF THE PATIENTS

Diagnostic group *	Men			Women			Total patients		
	No.	Mean	Age range	No.	Mean	Age range	No.	Mean	Age range
Manic-depressive depression ...	7	63.7	45-78	13	52.2	27-69	20	56.1	27-78
Chronic alcoholism	14	45.8	23-84	2	38.0	29-47	16	44.8	23-84
Conversion reaction	0	—	—	13	30.2	16-52	13	30.2	16-52
Undiagnosed	7	26.7	18-39	14	28.8	12-42	21	28.1	12-42
Sociopathic personality	8	24.3	17-34	8	22.4	17-26	16	23.3	17-34
Total †	36			50			86		

* The numbers of patients in manic-depressive group and chronic alcoholic group differ slightly from those in the first paper in this series(1) for reasons already stated(5).

† There were 100 patients in the entire study. Twenty-three patients (13 men and 10 women) are not discussed in detail in this paper.

The Undiagnosed Group.—There were 21 patients who did not meet the minimum criteria(1) for any of the diagnoses (undiagnosed group). Special mention of this group is made because unlike the other 4 groups, it does not represent a single clinical entity. It consisted of 12 patients with probable diagnoses of sociopathic personality, conversion reaction, or chronic alcoholism; 2 with a psychosis, either manic-depressive depression or schizophrenia; and 7 in whom a probable diagnosis could not be made. Consideration was given to the possibility that each of these latter 7 patients was clinically normal prior to his suicide attempt. Each of these 7 patients, however, had had no fewer than 4 psychiatric symptoms for at least a year before his attempt and was therefore probably not clinically well during this time.

Prevalence of Broken Homes (Table 2).—In this study broken home signifies death of a parent, a permanent separation of the patient's parents, or a temporary separation lasting at least 6 months, prior to the patient's 16th birthday. The prevalence of broken homes in each of the diagnostic groups was striking. The minimum figure was 47% in the manic-depressive group and the maximum figure was 86% in the patients with sociopathic personality. This high prevalence of broken homes in patients who attempt suicide has also been reported by Batchelor(3). Of the causes of broken homes noted in Table 2, there are 3 that suggest familial maladjustment as causes: divorce, separation, and jail. When these 3 are considered as reasons for the home breaking-up, then a striking finding is evident: patients with manic-depressive psychosis less frequently came from homes disrupted by divorce, separation, or jail than did patients in any of the other 4 diagnostic groups. Therefore the homes of manic-depressive patients showed less evidence of social maladjustment than did the homes of the other patients.

Suicidal Acts in the Patients' Families.—There was a family history (parents, siblings, and grandparents) of suicide or attempted suicide in 6% of the patients with manic-depressive psychosis, 12% with chronic alcoholism, 31% with conversion reaction, 10% of the undiagnosed group, and

TABLE 2

PREVALENCE OF BROKEN PARENTAL HOMES BEFORE
SIXTEENTH BIRTHDAY

Reason for break-up of home	Diagnostic group				
	Manic-depressive depression	Chronic alcoholism	Conversion reaction	Undiagnosed	Sociopathic personality
	%	%	%	%	%
Divorce	5	19	23	33	50
Separation due to marital discord ..	5	25	31	29	43
Jail	0	6	0	5	7
Illness	5	0	15	14	14
Death	32	37	15	33	29
Proportion who came from a broken home for any reason	47	62	54	62	86
Proportion who came from a broken home due to divorce, separa- tion, or jail	11	38	38	38	57

6% with sociopathic personality. The high figure in the families of patients with conversion reaction is of interest.

Previous Adjustment of the Patients (Table 3).—Inspection of Table 3 reveals that, in general, the manic-depressive group showed much less evidence of previous maladjustment than did the other 4 diagnostic groups. This is especially remarkable when it is remembered that the manic-depressive patients were significantly older than the remainder of the patients. In every area of adjustment the sociopathic personality patients showed more evidence of disturbance than did the manic-depressive patients. When the 3 other diagnostic groups were compared with the manic-depressive group the following striking differences were evident: the patients with chronic alcoholism had a higher prevalence of marital difficulties, previous hospitalizations, and arrests; the patients with conversion reaction had a higher prevalence of divorce, general hospitalizations, previous suicide attempts, and poor job history; and the undiagnosed patients had a higher prevalence of marital difficulties, general hospitalizations, poor job history, and arrests.

Although the patients with chronic alco-

TABLE 3
PREVIOUS ADJUSTMENT OF THE PATIENTS

Evidence of poor social adjustment	Diagnostic group				
	Manic-depressive depression	Chronic alcoholism	Conversion reaction	Undiagnosed	Sociopathic personality
Marital history					
Divorce * (%)	5	86	27	50	62
Total marital difficulty (%)†	37	92	55	69	100
Previous hospitalizations					
Mental (mean no.)	0.7	2.4	0.1	0.3	1.3
General (mean no.)‡	1.2	2.4	2.8	4.2	6.5
Total (mean no.)	1.9	4.8	2.9	4.5	7.8
Previous suicide attempts (%)	11	19	54	14	44
Job history (mean length of jobs held, in years)					
Men	6.7	3.1	—	1.2	0.4
Women	4.9	3.3	1.3	1.1	0.3
Proportion arrested at least once (%)	0	81	8	19	69

* Includes 2 annulments, one in a chronic alcoholic and one in an undiagnosed patient.

† This figure includes the prevalence of divorce plus serious marital incompatibility (the latter defined as separation, desertion, threatened separation, physical fighting, and extreme marital dissatisfaction).

‡ Excludes hospitalization for the uncomplicated delivery of a living infant.

holism, conversion reaction, and sociopathic personality, and those without a diagnosis, showed differences in some areas of previous adjustment, they resembled each other more closely than any one of them resembled the manic-depressive group.

THE SUICIDE ATTEMPT

Main Reason for the Attempt.—After each patient described his suicide attempt and the circumstances surrounding it, he was asked what he felt was the "main rea-

son" for his attempt. These answers were categorized as indicated in Table 4. The most striking finding was that manic-depressive patients gave as a main reason a much lower frequency of socially oriented reasons than did the other 4 groups and a much higher frequency of delusions and of feelings of depression. The patients described their main reasons as follows: the manic-depressive patients, "Pain in my mouth so bad nobody could help me" (somatic delusion); "Tired and couldn't sleep"; "I

TABLE 4
MAIN REASON GIVEN BY THE PATIENT FOR MAKING A SUICIDE ATTEMPT

Main reason	Diagnostic group				Sociopathic personality
	Manic-depressive depression %	Chronic alcoholism %	Conversion reaction %	Undiagnosed %	
Socially oriented reasons	35	64	74	77	73
Friction with spouse, lover	6	21	66	58	59
Friction with parent, child, or sibling	0	0	8	14	0
Excessive drinking	6	36	0	5	7
Poverty	6	7	0	0	0
Legal prosecution	0	0	0	0	7
Death of loved-one	17	0	0	0	0
Feelings of depression, disgust or worthlessness *	33	7	17	19	20
Delusions	17	0	0	0	0
Presence of a serious medical or surgical illness	6	7	0	0	7
Denial or "Don't know"	6	21	8	5	0

* When a patient stated that he was depressed or disgusted but not in relation to any of the socially oriented factors listed above and not in relation to being medically ill or deluded he was scored here. If he stated he was depressed or disgusted for any of these reasons he was not scored under feelings of depression but under the appropriate stress which he believed was causing his depressed feelings and caused the attempt.

couldn't manage things; they were too much for me"; "I was despondent about my (dead) husband"; "I felt bad about my sister dying and wanted to die with her"; from the chronic alcoholics, "No good reason"; "I didn't see any other way—my wife didn't want to live with me any longer"; "To keep from drinking. I was hopeless and nobody cared for me"; "I was mad because my wife didn't want me to drink that whiskey and she was right"; from the patients with conversion reaction, "I didn't want to face my husband when he found out about the rent trouble"; "To show my husband I meant it. I didn't think he believed me"; "I didn't want to live without my baby"; "Everything might be better if I wasn't here"; from the undiagnosed patients, "To see if he cared. I get those terrible headaches and he doesn't seem to worry"; "I was heartbroken about my wife leaving"; "To prove I could do it if I wanted. I wanted to hurt my mother; she keeps reminding me I'm no good. She likes to do this. She treats me like a child"; "Sick and tired of the whole thing—my mother's nagging and my sister trying to run my life"; and from the sociopathic personality patients, "Disgusted as heck about not being able to date Janice"; "On account of being in jail and waiting for my trial (for second armed robbery offense)"; "To frighten my husband"; "Mad, blue, disgusted. My husband was suing me for the kids and I didn't have enough money to fight him. And my boy friend didn't show up"; "To get attention. I just did it."

In patients with conversion reactions and sociopathic personalities and in the undiagnosed patients, the socially oriented reasons given were related chiefly to heterosexual difficulties. In contrast, in the alcoholics these socially oriented reasons were related to drinking itself, and in the manic-depressive patients, to death of a person important in the patient's life. Thus, even when the manic-depressive patients gave socially oriented reasons, they were not those associated with difficulties in on-going personal relationships or with excessive drinking, as in the other 4 groups.

In spite of the fact that the majority of the reasons for attempting suicide offered

by patients in the conversion reaction, undiagnosed, and sociopathic personality groups were socially oriented, almost a fifth of these patients gave profound feelings of depression without a specific social reference as a reason for their attempts. It is often conjectured that such patients are "using" a suicide attempt for some ulterior motive. While this may be true in some cases, it is also true that many are chronically unhappy persons who suffer from recurrent feelings of depression and hopelessness at various times in their lives.

Possibly Disturbing Events and Symptoms during the Six Month Period Prior to the Suicide Attempt (Table 5.)—In addition to the "main reason," we thought it important to ask whether certain specified events, the occurrence of which might have contributed to their suicide attempts, had occurred within 6 months of the attempts (Table 5). Sixteen such factors were investigated systematically in each of the patients (see questions 14-29 in the first paper of this series(1)).

Investigation of these factors revealed that the manic-depressive patients had significantly fewer primarily social difficulties in the 6 months preceding their suicide attempts than did any of the other 4 diagnostic groups. This was even more strikingly demonstrated when the death of a loved-one was excluded and the comparison was limited to difficulties in on-going personal relationships and to evidences of inability to meet the normal social demands (see footnote to Table 5). We believe that this is additional evidence that, in general, the manic-depressive patients lead a less disturbed life than patients in any of the other 4 groups. This finding correlates well with the findings described above concerning the main reasons for the suicide attempts, which indicated that the manic-depressive patients much less frequently gave socially oriented reasons for their attempts.

It was of interest that although difficulties at work (quitting, being fired, being demoted, or excessive friction with boss or fellow workers) and financial problems occurred rather frequently (Table 5) in the entire group, trouble at work was never given as a main reason for suicide, and pov-

TABLE 5

POSSIBLY DISTURBING EVENTS AND SYMPTOMS DURING THE SIX MONTHS PRIOR TO THE SUICIDE ATTEMPT

Event or symptom	Diagnostic group				Sociopathic personality %
	Manic-depressive depression %	Chronic alcoholism %	Conversion reaction %	Undiagnosed %	
Primarily social events					
Friction with spouse or lover	21	64	92	72	94
Impending break-up of marriage or love affair	0	37	45	35	67
Divorce, separation, or desertion	0	38	20	18	33
Friction with parent, child, or sibling	12	11	15	24	6
Financial problems	6	36	46	10	6
Legal difficulties	0	0	0	14	13
Job difficulties	43	38	86	35	53
Death of loved-one	32	0	46	5	0
Excessive drinking	6	100	0	33	53
Proportion of patients in whom at least one social stress occurred *	70	100	100	95	100
Delusions	40	0	0	0	0
Presence of serious medical or surgical illness ..	25	13	0	10	25
Drinking just before attempt	10	93	38	43	81
No evidence of clearly stressful occurrences ..	15	0	0	0	0

* If death of a loved-one is excluded, these figures become 48%, 100%, 100%, 95%, and 100%, respectively. If excessive drinking is excluded, they become 70%, 83%, 100%, 95%, and 100%, respectively.

erty was given as main reason by only 2 patients (Table 4). Whether these 2 difficulties would be more important in a group with a higher social and economic status is not known.

Emotional Reaction at Time of Suicide Attempt (Table 6).—The patients were asked to describe how they felt (their emotional state) at the time of the suicide attempt.

Their spontaneous answers were grouped into 7 categories (Table 6). In addition each patient was asked systematically whether they felt each of these 7 types of emotional reaction at the time of their suicide attempt. The results in Table 6 are based on the total of spontaneous statements plus answers to direct questions.

The first 3 categories concerned feelings

TABLE 6

EMOTIONAL STATE OF THE PATIENTS AT THE TIME OF THEIR SUICIDE ATTEMPTS

Emotional state *	Diagnostic group				Sociopathic personality %
	Manic-depressive depression %	Chronic alcoholism %	Conversion reaction %	Undiagnosed %	
Feelings about self					
Depression	85	60	100	68	77
Worthlessness	55	40	45	53	61
Disgust	75	40	64	63	61
Feelings directed towards others					
Anger	10	20	55	37	38
Spite	10	13	18	32	31
Frustration (in love)	5	7	45	53	46
Desire to gain attention	0	38	0	11	33
Feelings about self <i>only</i>	80	42	25	32	23
Feelings directed towards others <i>only</i>	0	0	0	5	7
Both feelings about self and towards others ..	20	58	75	63	70

* Each of these emotional reactions (states) was asked for independently and scored independently. Only 15 of the 86 patients described only a single emotional state at the time of their attempt; 50% of the patients described a mixture of at least 3 emotional states.

himself and the last 4, feelings directed towards other persons. Even in the 4 diagnostic groups—chronic alcoholism, conversion reaction, undiagnosed, and sociopathic personality—in which a high proportion (more than half) gave externally directed emotional reactions, these were almost always associated with feelings of depression, disgust, or worthlessness. Among the entire group of patients, there were only 2, one undiagnosed and one sociopathic personality, who gave only externally directed reactions. These findings indicate that suicide attempts are rarely made *only* because of feelings of anger, spite, frustration, or desire to gain attention. Even when these elements are present they become associated with feelings of depression, disgust, or worthlessness before the patient makes a suicide attempt. This is additional evidence that suicide attempts, even when they are not sincere attempts to die, are not simply attempts to manipulate the environment but are associated with feelings of self-depreciation and/or depression.

The high prevalence of feelings of depression, worthlessness, and disgust with self in the chronic alcoholic, conversion reaction, undiagnosed, and sociopathic personality groups should not be allowed to obscure the profound difference between patients in these 4 groups and in the manic-depressive group: a much higher proportion of the manic-depressive patients (80%) had *only* feelings of depression, disgust, or worthlessness (without any emotional reactions directed towards other persons) than had patients in the other 4 diagnostic groups—chronic alcoholism 42%, conversion reaction 25%, undiagnosed 32%, and sociopathic personality 23%. This finding is consistent with the data already discussed in which it was shown that the manic-depressive patients much less frequently gave primarily socially directed reasons for their attempts than did the other 4 groups.

Communication of Suicidal Intent.—There were no statistically significant differences among the diagnostic groups in the proportion of patients who had thoughts of suicide prior to the attempt (maximum variation was from 31% of the chronic alcoholics to 53% of the manic-depressive patients) and

in the proportion of patients who had told someone about having suicidal ideas prior to the attempt (maximum variation was from 14% of the undiagnosed patients to 35% of the manic-depressive patients). These data indicate a slight but insignificant trend for the manic-depressive patients to have made a less impulsive attempt than the other 4 groups, *i.e.*, more manic-depressive patients had prior thoughts about suicide and had told someone about these thoughts.

Half of the patients with chronic alcoholism (50%) and with conversion reaction (54%) had made their suicide attempts when another person was present. This contrasted with the manic-depressive patients and the undiagnosed groups where another person was present in only 10% of the cases in each group. The sociopathic personality patients were intermediate between these extremes—25% made their attempts in the presence of another person.

Influence of Age and Sex of the Patients.—The distribution of the sexes in the manic-depressive, undiagnosed, and sociopathic personality groups was not significantly different (Table 1). Any contrasts between these groups were therefore largely independent of the distribution of the sexes. The great majority (87%) of the chronic alcoholics were men and all patients with conversion reactions were women (Table 1). The differences in the sex distribution of these 2 groups did not account for any of the statistically significant differences reported in the tables.

The 5 diagnostic groups differed markedly in their mean ages (Table 1). The manic-depressive patients were the oldest group. Because of the differences already discussed between this group and the other 4, we thought it important to compare these groups on an age-adjusted basis, insofar as this was possible. Each diagnostic group was divided into a younger and older group as indicated in Table 7. The *younger* manic-depressive patients were then compared with the *older* groups in the other 4 diagnostic categories in order to compare diagnostic groups with patients of more nearly equal age.* The

* The fact that the older chronic alcoholic patients were appreciably older than the younger manic-depressive patients did not invalidate this

TABLE 7
DIVISION OF DIAGNOSTIC GROUPS BY AGE

Diagnostic group	Younger patients			Older patients		
	No.	Mean	Age range	No.	Mean	Age range
Manic-depressive depression	7*	41.1	27-47	13	64.0	52-78
Chronic alcoholism	7	30.7	23-39	9*	55.8	44-84
Conversion reaction	7	30.4	17-21	6*	41.7	32-52
Undiagnosed	11	21.4	12-29	10*	35.5	30-42
Sociopathic personality	9	20.7	17-33	7*	26.7	24-34

* These are the groups compared in the text under "Influence of Age and Sex of the Patients."

validity of these comparisons is limited by the small numbers of patients in each diagnostic group when divided according to age and by the fact that the age differences between 2 of the groups was so great that even using this method, older sociopathic personality patients were still significantly younger than the younger manic-depressive patients.

The data presented in Tables 2 through 6 were again compared in these age-adjusted groups. The only noteworthy differences from the original findings were: 1. Only 22% of the older chronic alcoholics and 10% of the older undiagnosed patients gave divorce, separation, or being in jail as a cause for the breaking-up of their parents' homes (see Table 2 for the percentages in the total groups of chronic alcoholic and undiagnosed patients). 2. None of the older undiagnosed patients had been arrested (see Table 3 for comparable figure). 3. The differences in the average duration of jobs among the total groups—manic-depressive longer than the other 4 groups (Table 3)—did not occur in these adjusted groups, except that the sociopathic personality patients still had held a job significantly shorter periods than patients in the other 4 groups. 4. A higher proportion (57%) of the younger manic-depressive patients complained of friction with their spouses than had the total manic-depressive group (see Table 4 for comparable data). These 4 differences do not seriously affect the conclusions previously discussed.

Seriousness of the Suicide Attempt

Another factor that might affect the results of an age-adjusted comparison, since, if the differences in the total groups had been due to differences in the seriousness of the attempt, these differences remained approximately the same

is the relative proportions of patients who had made serious attempts in each diagnostic group. In the chronic alcoholic, sociopathic personality, undiagnosed, and conversion reaction groups there were only 2, 1, 2 and 5 patients, respectively, who had made serious attempts according to our criteria. In the manic-depressive group there were 14 patients whose attempts were judged serious and 6 not-serious. When the serious patients in the manic-depressive group were compared with the not-serious patients, there were no significant differences (within the limitations imposed by the small size of the not-serious group) between them in regard to the factors considered in Tables 2 to 6.

It is of interest that a significantly higher proportion (70%) of the manic-depressive patients had made serious attempts than had the other groups—alcoholics 12%, undiagnosed 10%, sociopathic personality 6%, and conversion reaction 3%. This latter percentage did not quite reach the level of statistical significance when compared with the manic-depressive patients, significance ratio = 1.90).

DISCUSSION

The data of this study show that patients with manic-depressive personality had significantly fewer family adjustment difficulties than the patients with chronic alcoholism, conversion reaction, or sociopathic personality. This was also true of the manic-depressive patients when compared with a group of undiagnosed patients. The majority of patients with a probable diagnosis of chronic alcoholism, conversion reaction, or sociopathic personality. The emotional states of the manic-depressive patients and patients with chronic alcoholism were significantly different from the groups with conversion reaction, sociopathic personality, or undiagnosed patients.

with self, and of worthlessness, whereas those described by the other 4 groups included a high frequency of feelings of anger or spite, of frustration in a marital relationship or in love, and of a desire to gain attention. The manic-depressive patients also showed a significantly better lifelong adjustment than the other 4 groups—a more stable job history, less marital friction, less divorce, less hospitalizations, and fewer arrests. These findings are similar to those reported by Batchelor(2) in discussing the contrast between patients with manic-depressive psychosis and those with sociopathic personality.

The complexity of the relationship between attempted suicide and social stresses is indicated by 3 of the findings of this study. First, although the overall frequency of social difficulties was high in the entire group, there were 2 diagnostic groups, manic-depressive and chronic brain syndrome,⁴ in which the frequency of socially oriented difficulties was relatively low. Four-fifths of the patients with conversion reaction, sociopathic personality, and chronic alcoholism reported a socially oriented disturbance as a precipitating factor in their attempts, whereas only one fifth of the patients with chronic brain syndrome and manic-depressive depression reported socially oriented disturbances. This suggests that the clinical diagnosis is an extremely important intervening variable in determining the importance of socially oriented difficulties in precipitating a suicide attempt.

Secondly, the probable absence of any clinically normal patient in the entire series, implies that when psychiatrically well people are subjected to marital friction, divorce, death of a loved one, financial insecurity, and other social stresses they do not respond by making suicide attempts. This strongly suggests that a suicide attempt is a way of responding to social stress, that is not possible for psychiatrically well persons. This same idea has been expressed in a somewhat different fashion by Stengel(6). "At-

tempted suicide' is a behavior pattern which is at the disposal of only a limited group of personalities." It is still a possibility, however, that psychiatrically well persons may successfully commit suicide.

Thirdly, the question arises whether there is any diagnostic group of psychiatric patients who do not respond by making a suicide attempt, *i.e.*, is there any psychiatric illness in which suicide attempts are rare or never occur as a symptom or response? In this study there was not a single patient with an anxiety reaction (anxiety neurosis). There were other diagnostic categories not found among the patients, *e.g.*, homosexuality or manic phase of a manic-depressive psychosis; however, the relative scarcity of these diseases in the population at large makes it unlikely that they would occur in this series of 109 patients. On the other hand, since anxiety reaction is probably the most prevalent psychiatric illness—about 5% of the entire population(7)—it would be expected to occur in this series of patients. The probable absence of even a single patient with this illness indicates that patients with anxiety reaction do not attempt suicide or do so extremely rarely. Thus, simply being psychiatrically ill is not sufficient to lead to suicide attempts, but suicide attempts seem to occur only in certain specified psychiatric illnesses.

In this connection it is important to ask if any of the 7 undiagnosed patients in whom even a probable diagnosis was not made could have been psychiatrically well prior to their suicide attempt or could have suffered from an anxiety reaction. We have already presented the data indicating that they were probably not clinically well (normal) prior to the attempt. Since even no probable diagnosis was made in these 7 patients, the possibility of any or all of them having had an anxiety reaction cannot be excluded. We think it improbable that they did since every one had at least 2 symptoms not characteristic of anxiety reaction, and none had the fully developed syndrome as described elsewhere(8).

The contrast between manic-depressive patients and the chronic alcoholic, conversion reaction, undiagnosed, and sociopathic personality patients is a contrast between a

⁴ As indicated under "Method" a study of the frequency of patients with chronic brain syndrome was begun during the summer of 1956. These patients represented only a small percentage of the total in respect to the low frequency of socially oriented difficulties.

group of psychotic patients and 4 groups of patients who were not psychotic. Since the psychotic group showed a lesser frequency of socially oriented problems, it is important to ascertain if this was due to incomplete reporting in this group. Dahlgren(4) in a study of attempted suicide has pointed out that data concerning "eliciting causes" of the attempt were generally lacking in his psychotic patients. Since his patients were not systematically interviewed at the time of the attempt, he speculates, in retrospect, that the examiner might have been satisfied with the psychosis as the most important cause of the attempt and did not investigate socially oriented factors. This was not the case in this study because the same social factors were systematically investigated in every patient, regardless of diagnosis. However, even using a standardized questionnaire, it is possible to get less complete answers from patients whose illness interferes with their ability to respond. But none of the manic-depressive patients in this study was mute and only 10% tended to give primarily monosyllabic answers.

A final point about diagnosis is the absence of any patient diagnosed neurotic depressive reaction. As pointed out in the first paper of this series(1), when marked feelings of depression occurred in patients with a pre-existing psychiatric illness such as conversion reaction, chronic alcoholism, or sociopathic personality, the depression was considered a symptom of the pre-existing illness and not as a separate diagnosis. It is possible that the 7 patients in the undiagnosed group in whom a probable diagnosis was not made might be considered by other investigators as examples of neurotic depressive reaction. If this were the case, then patients with a neurotic depressive reaction still would have constituted only 6% of the total group of 109 patients.

Stengel, in an interesting series of papers on attempted suicide(6, 9, 10) has emphasized the "appeal character" and the social effects of the attempt. The long-term social effects of the suicide attempts were not investigated in the present study. Presumably all of the patients in this series who stated they made the attempt in order to gain the attention of a person important in their lives,

some who reported a frustration in love, and some who reported marital difficulties could be considered as having made an appeal. Batchelor, however, has raised the question whether the majority of suicide attempts in sociopathic personality patients in his study had an "appeal character" or were impulsive acts without an element of appeal(2). And, in our own series, very few if any of the attempts of the manic-depressive or chronic brain syndrome patients could be considered to have an appeal character. This interesting concept of the "appeal character" of suicide attempts, therefore, seems to us to require more detailed investigation.

The findings of the present study suggest the following schema for describing the interrelationships of psychiatric diagnosis, social difficulties, and attempted suicide:

1. Psychiatrically well (normal) persons never or very rarely make suicide attempts, regardless of the severity of the social stresses to which they are subjected.
2. Although suicide attempts occur as a mode of response in almost all diagnostic groups in psychiatry, they rarely if ever occur in patients with an anxiety reaction (anxiety neurosis). Apparently patients with anxiety reaction, in spite of being psychiatrically ill, have little predisposition to attempt suicide.
3. Those psychiatric illnesses in which suicide attempts occur may be divided into 2 categories, one (including chronic alcoholism, conversion reaction, and sociopathic personality) in which social difficulties appear to be a frequent precipitating factor for the suicide attempt, and another (including manic-depressive depression and chronic brain syndrome) in which social difficulties are infrequently associated with the suicide attempt. Thus, even in the diagnostic categories in which suicide attempts may occur, there are important differences in the role played by social stresses in precipitating the attempts. It would be interesting to compare systematically patients with chronic alcoholism, conversion reaction, and sociopathic personality who have never attempted suicide, with patients with these illnesses who have attempted suicide, in order to understand what predisposing factors other than social difficulties and clinical diagnosis

are necessary to precipitate a suicide attempt in these groups of patients.

SUMMARY

1. A study has been reported of social factors in the suicide attempts of 109 patients brought to a general hospital immediately after having made a suicide attempt.

2. Patients with chronic alcoholism, conversion reaction, and sociopathic personality reported a much higher frequency of social difficulties, such as marital friction, divorce, job instability, and financial dependency, than did patients with manic-depressive psychosis and chronic brain syndromes. They not only were involved in more social difficulties at the time they made the suicide attempt, but also reported more such difficulties throughout their lives.

3. Just before the manic-depressive and chronic brain syndrome patients attempted suicide they were disturbed by feelings of depression, self-disgust, and worthlessness, but seldom by feelings of anger or spite towards other persons or by feelings of frustration or neglect caused by others, while the patients in the other 3 diagnostic groups showed the opposite pattern.

4. There were probably no psychiatrically well patients and probably no patients with an anxiety reaction (anxiety neurosis) in the entire group of 109 patients who had made a suicide attempt.

5. The interrelationships of social difficulties, diagnosis, and suicide attempt, based on the findings of this study, were discussed.

BIBLIOGRAPHY

1. Schmidt, E. H., O'Neal, P., and Robins, E. *J.A.M.A.*, 155: 549, June 5, 1954.
2. Batchelor, I. R. C. *Brit. M. J.* 1: 1342, June 12, 1954.
3. Batchelor, I. R. C., and Napier, M. B. *Brit. J. Delinquency*, 4:1, 1953.
4. Dahlgren, K. G. *On Suicide and Attempted Suicide*. Sweden: Lindstedts, 1945.
5. O'Neal, P., Robins, E., and Schmidt, E. H. *Arch. Neurol. and Psychiat.*, 75: 275, 1956.
6. Stengel, E. *Proc. Royal Soc. Med.*, 45: 613, 1952.
7. Cohen, M. E., and White, P. D. *A. Res. Nerv. and Ment. Dis. Proc.*, 29: 832, 1950.
8. Wheeler, E. O., White, P. D., Reed, E. W., and Cohen, M. E. *J.A.M.A.*, 142: 878, March 25, 1950.
9. Stengel, E. *Canad. M. A. J.*, 74: 116, Jan. 15, 1956.
10. Stengel, E., and Cook, N. G. *J. Forensic Med.*, 1: 252, July-Sept., 1954.

BROMIDE INTOXICATION AND QUANTITATIVE DETERMINATION IN SERUM

SIDNEY J. TILLIM, M. D.¹

Finding in a patient a blood bromide of 1470 mgm %, reaffirmed in another laboratory, prompted an inquiry to Queries and Minor Notes of the Journal of the American Medical Association. The consultant's reply(1) pointed out the unreliability of the Wuth method for quantitative determinations. It also stated, "By all the evidence with which I am familiar, blood bromide level of 1470 mgm % not only exceeds any published records, but in my judgment it is quite impossible since it far exceeds the amount compatible with life . . . and must be explained by possible error in calculation or computation."

WUTH METHOD

The Wuth method with various modifications has been used almost exclusively in clinical laboratories for approximately 30 years. In essence, it consists of adding gold chloride to a protein-free sample to be tested. Changing color to yellow, brown or even reddish brown indicates the presence of bromide, presumably due to formation of gold bromide. The percentage concentration is determined with a colorimeter. Wuth originally used the less accurate method of comparator tubes.

The author does not recall any previous publication of blood bromide values even approximating that found in the patient. The librarian of the American Medical Association(2) after a search located a reprint of an article by Gundry(3) which mentions values of 555 and 715 mgm %. It also refers to 7 deaths or about 1% of bromism cases reported in the literature. Dr. Maurice J. Taylor(4), Salt Lake City, who had previous experience with our patient reported February 10, 1955, that in the past 18 months he had found 2 cases with blood bromide levels of 960 and 1350 mgm %, "still apparently able to work but having evidence of personality changes." One of these 2 patients had an exploratory for sus-

pected cord tumor at T3 with a finding of "generalized arachnoiditis apparently due to bromine changes."

The AMA consultant volunteered the opinion that "bromides are relatively mild and relatively harmless unless taken to excess over long periods of time." This is a more mild caution about the use of bromides than appears in the advertising of Miles Nervine which happens to be the product the patient had taken. The manufacturer cautions that "over dosage or habitual use, or use in the presence of kidney disease may be dangerous." The author has directed attention to some of the hazards of bromide medication(5). Neither the reassurance nor the caution contributes to public protection. Well persons do not require sedatives. Bromide users are not dependable to limit use to mild conditions while the drug is purchasable over the counter. There are definite contraindications to the use of bromides which physicians sometimes overlook with detriment to patients. Miles Laboratories questions the authenticity of reported cases of bromism with the statement "most of such cases in a medical history sense are quite unreliable(6)." This minimizes the incidence and seriousness of the problem. The clinical picture of bromism in toxic degree is sufficiently suggestive and the course under treatment is conclusive. Treatment of the bromism is the primary therapeutic goal; underlying conditions such as nutritional disturbances, organic disease and psychic problems are dealt with afterward. Our cases support these views.

CASE REPORTS

CASE 1.—D.C., a 45-year-old periodic alcoholic, admitted January 12, 1955, after several admissions to 2 different hospitals since November 2, 1954, when first admitted as a case of acute alcoholism. His last discharge from the general hospital was January 2 with a supply of paraldehyde to complete his recovery. On January 5 the paraldehyde was discarded in favor of "Nervine" because the wife protested the odor around the house. Between

¹ Address: Nevada State Hospital, Reno, Nevada.

then and the date of admission he consumed about 20 oz. of this preparation. Commitment as a mental case was based on episodes of confusion and disorientation, agitation, restlessness, insomnia and intermittent voicing of paranoid delusions. Physical examinations showed tremors of the hands, slurring speech and an ataxic gait. A blood bromide determination on January 13 was reported as 1470 mgm %. Because of the unusual finding, the laboratory repeated the test several times with various modifications and the lowest figure that day was 1438 mgm %. The laboratory used the modified Wuth method and the Klett-Somerson Colorimeter according to the Klett-Somerson clinical manual. Separate samples were submitted the following day to another laboratory. The results of tests in the two laboratories follow:

Laboratory 1			
1/13	Serum	1470	
	4 hrs. later	1438	
1/17	Serum	916	
	Urine	460	
1/20	Serum	601	
	Urine	517	
1/27	Serum	297	
	Urine	428	
2/2	Serum	114	
2/9	Serum	49	
Laboratory 2			
1/14	Serum	1250	
	Spinal fluid	954	
	Urine	562	
1/17	Serum	966	
	Urine	377	
1/20	Serum	722	
	Urine	461	

Subject was treated with oral and intravenous chlorides. Sedation was provided from chlorpromazine of only 25 mgm t.i.d., except for the first dose of 50 mgms. There was a temporary aggravation of the neuropsychiatric symptoms during the 3rd and 4th days in the hospital, but steady progress toward recovery thereafter. Blood bromide dropped to 49.2 mgm % on February 9 and patient was discharged as recovered.

CASE 2.—A.G., a 74-year-old white male, admitted November 9, 1954, was well until about 2 months before admission. He became depressed and agitated over the alleged loss of a mining claim and was admitted to a private sanitarium. There he received 8 electroshock treatments while residing outside. At the time, he received Thorazine medication. He improved clinically, but developed jaundice, presumably due to the medication. He also received a prescription of Sedaphen, a mixture of phenobarbital and bromide, to take one or two teaspoonfuls "as needed for nervousness," from October 7 to the 24. On his return home November 7 he was on paraldehyde for 3 days, drams

2, "as needed," until admitted to this hospital. On admission, he was in a restless, stuporous delirium. Physical examination was difficult because of uncooperativeness. He failed to improve on general supportive measures. The atypical character of the psychosis led to closer questioning of the relatives about previous medications and a blood bromide determination done November 18 showed a level of 323.3 mgm %. The spinal fluid bromide on November 22 was 103.3 mgm %. Subject continued disturbed and uncooperative, making administration of chlorides, either oral or by vein, not too satisfactory.

Ten days post-admission he showed signs of cardiac decompensation and elevation of temperature. On November 22, he was transferred to a general hospital and there died December 11, 1954. Causes of death were given as: 1. Organic heart disease; 2. Bromide intoxication. Blood bromides taken at the general hospital showed on November 23 a concentration of 222 mgm %, and on December 9, 172 mgm %.

CASE 3.—F.S., a 79-year-old married Italian, was admitted January 14, 1953 because of recurring episodes of confusion. The last episode began 2 weeks before admission and was associated with auditory and visual hallucinations. He was a transfer under commitment from a general hospital where he had been treated for 5 days with phenobarbital and dilantin for tremors and convulsive reactions. Examination showed general tremulousness, confusion, disorientation and hallucinosis. The heart was enlarged in mild decompensation with auricular fibrillation and liver enlargement. He walked unsteadily on a wide base. He had been on Elixir Chloral and Bromide which contains 120 grains of bromide per ounce from December 10 to the 24, consuming 10 to 12 ounces before being hospitalized. The prescription instructions were for a teaspoonful t.i.d. and 2 teaspoonfuls at bed time. A blood bromide determination the day after admission showed 304.2 mgm %. The second test on January 22 showed 299.7 mgm %. On January 23 the spinal fluid bromide was 183.15 mgm %. The patient made gradual improvement under chloride therapy and on February 6, 1953 was returned to the general hospital for treatment of his cardio-renal syndrome. He was readmitted May 12, 1953 and died June 14, 1953 of myocardial failure.

CASE 4.—R.C., a 37-year-old chronic alcoholic in his third admission was brought to the hospital January 28, 1954 from the local jail. He had been charged with drunkenness. Physical examination was essentially negative except for a generalized punctate rash over the chest, abdomen and thighs. He was oriented and co-operative but boastful and garrulous.

During the 3 days in jail he received bromide medication, prescribed by a physician but dispensed by the jailer so that the amount given is uncertain. A blood bromide determination the day after admission revealed 274.28 mgm %. A second examination 4 days later showed a blood bromide level of 260.75 mgm %. Sodium chloride therapy reduced

the blood bromide level to 105.45 mgm % by the twelfth day. Recovery was uneventful including disappearance of the rash.

CASE 5.—S.G., a 62-year-old white female, was admitted June 13, 1955 as a transfer from a local general hospital where she was admitted for an acute emotional disturbance, due to the impression that the neighbors had read a telegram of her son's accidental death, which was true. A daughter related that the patient had been paranoid for 8 years and had become worse the past 2 weeks. She had been on "Nervine" for 6 months—the amount taken is not known. Physical examination showed her unable to stand or walk with her eyes closed and ataxia with eyes open. There was a tremor of the tongue and lips. Pupils were contracted and did not react to light or accommodation. Deep tendon reflexes were depressed or absent. She expressed delusions and was disoriented for time and place. A bromide determination June 14, 1955 showed 228.7 mgm % for the blood and 199.8 mgm % for the urine.

Patient made uneventful progress in treatment with chlorides. Six days after admission the bromide level had dropped to 114.75 mgm % for blood and 58.8 mgm % for urine.

The patient was discharged as recovered from the acute psychosis on July 7, 1955. Diagnosis—psychosis, bromide intoxication and paranoid personality.

DISCUSSION

Studies by Gray and Moore(7) justify the assumption of error in the laboratory findings of Case 1, but not the assumption of "possible error in calculation or computation(1)." The samples were run in 2 commercial clinical laboratories, staffed by competent personnel. A patent fault or source of possible error in a laboratory method should appear as a definite percentage incidence. This is not evident from the literature. Their studies seemed only concerned with moderate concentrations and not the extreme of our case and the few others mentioned. Some significance should attach to the rate of reduction, percentage-wise, which roughly corresponds to experience with lesser concentrations. The tests were done in the same laboratories. Physiologic or chemical factors influencing the first specimen probably would not persist for a week in multiple samples. It should be noted further that there was the expected ratio between blood and spinal fluid values. Dr. Compton(6) claims the Wuth method "wholly unreliable" for values over 300 mgm %. He recommends the Brodie-Friedman method (J. Biol.

Chem., 124:511, 1938) which is allegedly too complex for routine in clinical laboratories. Is it possible that the consumption of an inordinate quantity of bromides in a relatively short time can produce in humans such a concentration in serum without irreversible organic damage?

Our patient consumed in uneven daily amounts for 7 days approximately 8 times the daily therapeutic dose of bromides. Credence is added to these speculations by the fact that 8 months previously the same person had more serious neurological complications with a blood bromide of 100 mgm %. At that time the disability advanced over several months. There was then suggestive evidence of multiple-sclerosis and posterolateral involvement. The neurologic findings were "marked ataxia, weakness, past pointing, blurring speech, hyperactive K.J's. and loss of vibration sense in both legs(2)." He had been on combinations of barbiturates and triple bromides. The effectiveness of chlorpromazine in this case is worth noting. Generally the treatment for alcoholic withdrawal is no mean task—from the so-called "comprehensive" approach tantamount to nearly everything in the pharmacopoeia, chief reliance on paraldehyde(8, 9,) the vitamin "cocktail" with insulin, and hypoglycemic therapy preferred by the author(10). Effectiveness of Thorazine reduced the need even for the latter procedure. Dosage beyond the first was relatively small.

Cases 2 and 3 are presented because of fatal outcomes. Their immediate causes of death do not indicate the bromide factor but no reasonable consideration can exclude its contribution. In case 2 the man was in good health 3 months previous to his death. Much happened to him by way of treatment which could be implicated, such as the electroshock. The delayed bromide elimination probably affected adversely the course of his illness. He had a higher bromide concentration than the first test indicated because no bromides were administered at the hospital. Combined use of electroshock and sedatives, particularly Thorazine, is not recommended.

Case 3 illustrates the often repeated caution to beware of bromides for elderly persons, especially in the presence of cardiac or renal involvement. This man took the

bromides on prescription. Already handicapped by recurring episodes of confusion, bromides would tend to excite delirium. It is not surprising that his behavior deteriorated on the medication in the general hospital where the bromism was not suspected. The accumulative action was rapid and the elimination characteristically slow. An aggravation of the cardio-renal syndrome may be assumed.

Case 4 shows the rapidity with which symptoms of bromism may develop. In 3 days under "controlled" (jail) conditions, he developed signs of intoxication and a blood concentration of 274.28 mgm %. Such rapidity of development is not generally recognized. The rash which occurs in about 10% of cases does not necessarily follow prolonged use. It may result from irritation, when bromide is eliminated through the skin, or an allergic reaction. Case 5 shows an accentuation of a psychotic syndrome. This, too, is a well recognized possibility against which physicians should guard. The promptness of recovery from the intoxication syndrome identifies the offending agent. She has been out of the hospital 14 months.

Gray and Moore(7), besides finding all tests short in accuracy, advise "it is better to determine blood and urine chlorides for which several exact methods exist. . . . The resulting chloride deficiency is probably more importantly the cause of the symptoms of the nervous system and skin disturbances than is the increase in bromine in the blood." They cite approvingly Minaki and Gillen(11) that "there is no correlation between the bromide level and the mental state." Individual tolerances for other drugs and alcohol are well known. They claim a chloride replacement of 40% or over would be fatal, while 25 to 36% cause only intoxication. Unfortunately no chloride determinations were done in Case 1. Campbell(8) explodes the popular assumption of a correlation between blood bromide level and psychiatric manifestations, that 150 mgm % is the dividing line. He cites a patient with 50 mgm % blood bromide who was retarded, drowsy, partially disoriented with hyperreflexia, slurred speech and nystagmus. He also notes that 32 of his 36 cases had major neuropsychiatric disturbances underlying the

intoxication. Barbour(12) claims "the blood bromide level will vary with the renal efficiency and with the fluid intake." The blood bromide level at which neuropsychiatric symptoms appear depends also on the underlying psychic disturbance for which the drug was taken.

TREATMENT

Bromism is not difficult to treat successfully. The treatment may be differentiated into 3 phases: sedation with a minimal of physical restraints; elimination of the bromide by chloride substitution; and meeting of nutritional requirements.

Sedation for a delirious patient presents special problems. Paraldehyde has been suggested as the drug of choice(8, 9). This seems a poor choice because paraldehyde tends to aggravate delirium as observed in cases of alcohol withdrawal. Barbiturates are no better. The author has used hypoglycemic reactions with considerable effectiveness(5). This method has these advantages: encourages fluid intake which may incorporate sodium chloride, stimulates hunger and acceptance of food, and after each treatment temporarily improves mental clarity. Elimination of the bromide may be increased through the urine output and through the skin, if copious diaphoresis is induced.

Harris and Derian(13) report rapid clearing of symptoms with the use of niacinamide in daily amounts of 600 to 750 mgms. They consider this treatment particularly useful in cases with cardiac involvement when ammonium chloride should be substituted for the sodium chloride. Ataraxics are a promising means of sedation. Thorazine was obviously effective in Case 1, in the face of failure in the general hospitals with paraldehyde, barbiturates and opiates.

Replacement of bromides with chlorides, usually sodium chloride, is a specific treatment. However, this is subject to modifications dependent upon requirements of individual cases, for example, the substitution of ammonium chloride for persons with a cardiac deficit. The presence of nausea may preclude either form of chloride by mouth, to be circumvented with sodium chloride intravenously. The suggested use of niacinamide

as a means of improving mental status merits further trial. Addition of mercurhydrin to the sodium chloride treatment allegedly enhances the output of bromide through the kidneys by 60%, and 130% when ammonium chloride is used(9). Evans(14) reports a very large increase in kidney excretion of total halides when mercurial diuretics are used, with a proportionate increase in the excretion of bromides. Further study on the use of mercurials should not be tried on patients with renal involvement. Cornbleet(15) prefers ammonium chloride even in the absence of cardiac complications, but ammonium chloride in adequate amounts is prone to produce gastric distress. Nutrition *per se* is not a serious matter. Malnutrition is less frequent with bromism than with alcoholism, unless the intoxication existed for a considerable time.

SUMMARY

Five cases were presented illustrating several principles for the prescribing of bromide medication. A case is reported of an unprecedented serum bromide value as determined by the modified Wuth method. The suggestions that very high bromide findings are erroneous warrant further controlled studies. A few reports of similar findings are not conclusive for condemnation of a method in use for 30 years. Physicians and

druggists still need warning against indiscriminate dispensing of bromides. Bromides may be mild but not harmless—they are usually taken by persons incapable of exercising good judgment or moderation. Dispensing without a physician's prescription should be prohibited.

BIBLIOGRAPHY

1. Personal Communication dated March 8, 1955.
2. Personal Communication dated June 7, 1956.
3. Gundry, L. P. J.A.M.A., **113**: 466, August 5, 1949.
4. Personal Communication.
5. Tillim, S. J.: Am. J. Psychiat., **109**: 196, Sept. 1952.
6. Compton, W. A., M. D. Communication from Miles Laboratories, Inc., Feb. 16, 1955.
7. Gray, M. G., and Moore, M.: Conf. Neurol., **4**: 213, 1942.
8. Campbell, J. D.: So. Med. J., **42**: 967, Nov. 1949.
9. Hussar, A. E., and Holly, L.: Am. Jour. Medicine, **20**: 100, Jan. 1956.
10. Tillim, S. J.: Am. J. Psychiat., **104**: 576, March 1948.
11. Minaki, L., and Gillen, J. B.: B.M.J., **2**: 859, 1937.
12. Barbour, R. F.: Proc. Roy. Soc. Med., **29**: 1391, 1936.
13. Harris, R. S., and Derian, P. S.: So. Med. J., **42**: 973, Nov. 1949.
14. Evans, J. L.: Med. J. Australia, **1**: 498, April 2, 1955.
15. Cornbleet, T.: J.A.M.A., **146**: 1116, July 21, 1951.

TWO-YEAR FATE STUDY OF THORAZINE-TREATED PATIENTS

PAUL E. FELDMAN, M.D.¹

Ample literature is now available reporting upon the efficacy of short-term treatment with Thorazine.² Both favorable as well as unfavorable reports have been assessed upon the basis of information obtained following the administration of Thorazine for 2 or more months. Because of the interest in ataraxics, these short-term observations were both practical and desirable.

Sufficient time has now elapsed since the introduction of Thorazine (early in 1954) to observe its effects after it has been administered for 2 or more years. These observations should provide additional information as well as support or disproof of certain predictions which were made a year or two ago. Most clinicians and researchers in this field have been awaiting answers to such questions as—Does tolerance formation follow the prolonged administration of Thorazine? Can dosages be reduced to any substantial degree after maximal therapeutic responses are obtained? Is there evidence of continued toxicity? Do side effects persist with the same intensity and frequency as observed early in medication? If they do persist, how are they managed? Is there evidence to support Bailey's(1) warning that the ataractic drugs are poisons? What portion of chronic psychotics respond to Thorazine to the degree that they can be released from the hospital? What has been the fate of those patients who responded favorably and were released a year ago? How many of them have had to return to the hospital? Why? What has been the fate of those who did not respond to a degree where release from the hospital was feasible? Are they still receiving Thorazine? If not, why not?

METHOD

In a controlled research study, 317 patients at the Topeka State Hospital were

¹ Director of Research and Education, Topeka State Hospital, Topeka, Kan.

² Thorazine for this study provided by Smith, Kline and French Laboratories.

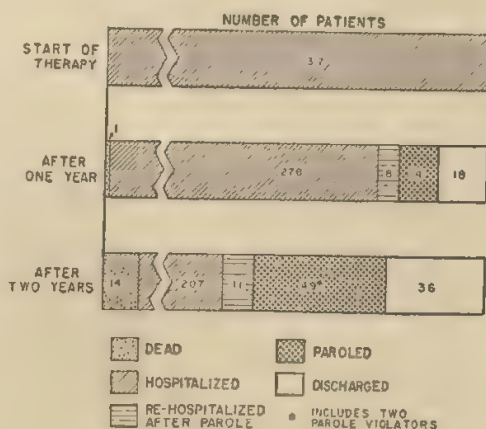


FIG. 1

placed upon Thorazine medication during June 1954. Accurate records of these patients have been maintained and, following one year of medication, the analysis of our results was published(2). At that time it was reported that 41 of these patients had been released from the hospital. This first year report also gives the details of the criteria used in the evaluation of the patients. A similar method of evaluation was used for the 2-year report.

RESULTS

Fig. 1 indicates the fate of the 317 patients who comprise the test group.

RELEASED-GROUP

Table 1 indicates the number of patients released as of July 1, 1956 and a comparison

TABLE 1

TWO-YEAR RELEASE RATES

	Patients discharged or paroled *	
	After 1 year	After 2 years
Number of patients.....	32	85
Percent of total group**..	10.1	28.0
Average age	45 yrs.	47 yrs.
Average duration of illness..	5 yrs.	6+ yrs.

* Does not include patients re-hospitalized from parole.

** Does not include patients who died.

with the group released a year prior to that time.

Table 2 contrasts the composition of the first and second year released-groups.

The 41 patients who on July 1, 1955 comprised the first year released-group underwent the following fate by July 1, 1956:

Discharged from parole.....	18
Still on parole.....	14
Died	1
Returned to hospital.....	8

Five of the 8 patients in this group who were returned to the hospital had failed to continue medication after their release.

At the end of the second year, 99 patients who were no longer in the hospital showed the following fate:

Discharged from parole..	36	} 83
Still on parole	47	
Died	14	
Elopement	2	

A questionnaire sent to the 83 patients on parole or discharged, yielded the following information (60 patients responding); Patients still continuing on Thorazine: 40 (66.6% of released group); Average maintenance dose of Thorazine: 125 mg/day. Of the 20 patients no longer receiving Thorazine, 18 discontinued the drug at the time of release from the hospital and have not found it necessary to resume this medication. The remaining 2 patients have

changed to some other type of medication upon the prescription of their family physician.

IN-PATIENT GROUP

Two-hundred-twenty of the patients are still hospitalized; and of these, 144 (65.5%) are still receiving Thorazine. Of this latter group, 21 patients (14.6%) are receiving dosages greater than were administered a year ago, an average increase of 225 mg/day.

Thirty-seven patients (25.7%) are receiving the same dosages as administered the year before, and 86 patients (59.8%) are receiving smaller dosages than a year ago—an average decrease of 375 mg/day.

The latter 2 groups—those receiving identical and decreased dosages, represent 85.4% of the patients who are now receiving Thorazine. Twelve additional patients have continued with Thorazine medication, but this has been combined with another ataractic drug (Reserpine, Frenquel or Pacatal).

Eighteen of the patients whose Thorazine medication had been discontinued are now receiving some other ataractic drug with a more effective response.

During the past 2 years, 11 patients in the group have been returned from parole. The time outside the hospital varied from 2 weeks to 10 months and no consistent cause for return is apparent. Four were returned for inability to maintain improvement gained in

TABLE 2
COMPOSITION OF RELEASED-GROUPS

	1st Year *				2nd Year **			
	No. of pts.	% of grp.	Aver. age	Aver. dur. of illness	No. of pts.	% of grp.	Aver. age	Aver. dur. of illness
Schiz. reac.	24	60	40+ yr.	7 yr.	60	72	41 yr.	6 yr.
Catatonic	8	—	—	—	17	—	—	—
Paranoid	9	—	—	—	29	—	—	—
Undiff.	3	—	—	—	8	—	—	—
Schiz-aff.	4	—	—	—	3	—	—	—
Childhood type	—	—	—	—	1	—	—	—
Chr. br. syndr.	6	15	60+ yr.	1+ yr.	11	13	63 yr.	2 yr.
Senile	1	—	—	—	1	—	—	—
Cer-vasc.	3	—	—	—	5	—	—	—
Unk.	2	—	—	—	5	—	—	—
Invol. reac.	4	10	65 yr.	5 yr.	5	6	61 yr.	4+ yr.
Psychoneuroses	3	7½	33½ yr.	2 yr.	3	3½	35 yr.	1 yr.
Man-depr. reac.	1	2½	62 yr.	2 yr.	2	2½	68 yr.	11 yr.
Misc.	3	5	—	—	2	2½	—	—

* Data includes patients who died or were returned from parole.

** Data includes two patients upon elopement.

the hospital, 2 for inability to adjust in the community, and the remaining 5 for "reasons not stated."

IMPROVEMENT

A survey of the present behavioral responses of those still receiving Thorazine, following the criteria for evaluation used a year ago(2), indicates that Thorazine remains effective in the same areas as noted previously.

Since a non-technical evaluation can be quite revealing, the following question was presented to the charge aide of each patient: "How do you feel patient X is getting along now?" No prompting or instructions were added which might bias their responses. The responses showed equally favorable or unfavorable impressions. The following are some of the typical replies:

Patients no longer receiving Thorazine

- "About the same."
- "Disturbed most of the time."
- "Slow—no energy."
- "Kind of backward and forward."
- "Fluctuates—not so good."
- "Now better than ever."
- "Fairly well."
- "O.K.—does work."
- "Doing fine."
- "Fine without medication."
- "Fine—works for Dr S."

SIDE EFFECTS

Table 3 indicates the incidence of side effects on the in-patient population. It was not feasible to include data from outpatients because of the unreliability of objective evaluations by lay observers. Drowsiness still appears to be the most common side effect and apparently increases in frequency with the continued use of Thorazine. However, only one-third of the cases of drowsiness reported were of such severity as to warrant antidote medication. In this latter respect, small doses of dextro-amphetamine or ephedrine sulphate effectively masked this symptom.

Parkinsonism appears to have doubled in frequency. In cases in which the muscular rigidity, excessive salivation or hyperkinetic phenomena were excessive, the syndrome

Patients still receiving Thorazine

- "About the same."
- "Not so good."
- "Is fairly loud—hallucinates."
- "Still very hyperactive."
- "I can't see any difference in her"
- "Little better."
- "Much, much better."
- "Just fine—works every day down town."

TABLE 3
INCIDENCE OF SIDE EFFECTS OF HOSPITALIZED PATIENTS

Side effect	Percentage of patients showing side effects	
	1954-55	1955-56
Drowsiness	23	39.0*
Parkinsonism	3.8	6.6
Allergy	3.8	2.9
Dizziness	2.8	4.4
Hypotension	2.8	2.9
Depression	2.2	2.2
Jaundice	1.9	0.7
Blood changes	1.9	2.2
G. I. disturbances	1.9	4.4
Turbulence	1.9	4.4
Seizures	0.9	0
Edema	0.9	0
Visual disturbances	0.6	0

* Drowsiness reported in 53 patients, but in only 17 patients (32%) was the drowsiness of severity to warrant antidote medication.

was effectively curbed by the administration of Cogentin or Artane.

Skin rashes were the only allergic phenomena noted. They occur in nursing personnel handling pulverized Thorazine tablets as well as in patients. These rashes are effectively controlled by Benadryl, Teldrin, Chlortrimeton, or Hydrocortone Lotion.

Dizziness, though occurring at almost doubled frequency, was extremely mild and did not require any special medication.

Hypotension occurs at an unchanged frequency, but is very mild and never incapacitating. It can be counteracted by small doses of ephedrine sulphate.

Depression is reported in 2.2% of cases. It was mild and responded well to dextro-amphetamine.

One case of jaundice is reported; it subsided uneventfully without discontinuation of medication and its relationship to Thorazine is unclear. The relatively low incidence of jaundice at the 2-year mark is in keeping with the concept that the obstructive hepatitis seen in these patients is probably allergic in nature and similar in mechanism to the Herxheimer Reaction noted following arsenical medication.

Three cases of blood changes were reported with all 3 cases showing WBC counts in the 2,000-3,000 range. Thorazine was discontinued in these patients and recovery was uneventful.

The most common gastro-intestinal disturbance was constipation which responded well to mild laxatives. Occasionally emesis was reported.

Turbulence continues to manifest itself and was reported 3 times as often as a year ago. It appears to be related to dosage-manipulations—up or down. Convulsive seizures, visual disturbances, urinary retention and incontinence were not reported.

SUMMARY AND CONCLUSIONS

1. Ninety-six chronically psychotic patients (26.2%) treated over a 2-year period with Thorazine have been released from the hospital. The stability of the release is indicated by the fact that only 11 of these patients have been returned from parole.

2. Younger schizophrenics are more likely to respond to Thorazine to the extent that their release from the hospital is feasible.

3. Of the patients remaining in the hospital, 65.5% are still receiving Thorazine.

4. Behavioral improvement following Thorazine medication is maintained for at least 2 years.

5. There appears to be evidence that prolonged administration of Thorazine does *not* lead to tolerance formation. Eighty-five point four per cent of the patients are receiving identical or smaller dosages of Thorazine than they were receiving a year ago.

6. Some patients who responded minimally to Thorazine have shown a better response to one of the other tranquilizers.

7. Eighteen of the Thorazine patients are showing a better response to combined therapy.

8. Nursing personnel express conflicting opinions as to the efficacy of Thorazine medication.

9. There is ample evidence of continued toxicity of Thorazine after 2 years of medication. This reinforces the concept that ataractic therapy must at all times be under medical supervision.

10. Maintenance dosages are substantially smaller than the dosages necessary to obtain the initial therapeutic response.

11. Blood studies (at monthly intervals) must be continued so long as the patient receives Thorazine.

12. The need for routine liver-function tests is equivocal unless Thorazine medication is interrupted and then restarted.

13. Side effects persist throughout the period of medication. All of them can be controlled, ameliorated or eliminated by the administration of proper antidote or discontinuation of Thorazine medication.

BIBLIOGRAPHY

1. Bailey, P. Academic Lecture. *Am. J. Psychiat.*, 113: No. 5, 387, Nov. 1956.
2. Feldman, P. E. *J. Clin. and Exp. Psychopath. and Quart. Rev. Psychiat. and Neur.*, 18: 1, Jan.-Mar., 1957.

THE INTRAFAMILIAL ENVIRONMENT OF SCHIZOPHRENIC PATIENTS: II. MARITAL SCHISM AND MARITAL SKEW

THEODORE LIDZ, M.D., ALICE R. CORNELISON, M.S.S., STEPHEN FLECK, M.D., AND DOROTHY TERRY, Ph.D.¹

We are engaged in a long-term intensive study of the intrafamilial environment in which the schizophrenic patient grows up.² Space does not permit an adequate exposition of the theoretic framework behind these investigations, and we shall seek to impart only an indication of our orientation. Previous studies have indicated that serious pathology of the family environment is the most consistent finding pertaining to the etiology of schizophrenia. We are considering schizophrenia as an extreme form of a social withdrawal, specifically characterized by efforts to modify reality into a tenable form by distorting the symbolization of reality, or through extreme limitation of the interpersonal environment. A theory of schizophrenia must explain both the patient's need to withdraw regressively and symbolically from the realm of shared living and meanings, and also his ability to do so. As the family is the primary teacher of social interaction and emotional reactivity, it appears essential to scrutinize it exhaustively. There is now considerable evidence that the schizophrenic's family can foster paralogic ideation, untenable emotional needs, and frequently offers contradictory models for identification which cannot be integrated. The importance of the very early mother-child relationship seems clear, but we are tentatively considering that deficiencies in this relationship may only establish a necessary *anlage* for the development of schizophrenia—or for certain other psychiatric and psychosomatic disorders. An *anlage* is not a cause. It remains possible that specific determinants may be found in the later difficulties in interpersonal relationships. We hypothesize that the ego weakness of the schizophrenic may be related to the introjection of parental weakness noted in the

mother's dependency upon the child for fulfillment; to the introjection of parental rejection of the child in the process of early identification with a parent; and to the depreciated images for identification presented by the devaluation of one parent by the other.

The careful collection of data from 16 families has now continued for several years, through weekly interviews with family members; observation of their interaction with each other and the staff; visits to the home, by projective testing, and other techniques. The methodologic problems in collecting and assessing data are many, but technical difficulties cannot continue to bar exploration of an area which appears vital to the study of schizophrenics.

It is important to point out that the families studied are middle and upper class, able and willing to maintain a patient in a private psychiatric hospital for a long period. The only criteria for inclusion in the study are relative youth of the patient, hospitalization in the Yale Psychiatric Institute, and that the mother and at least one sibling are available as informants. By comparison with other groups, it has become quite certain that there is a bias toward the selection of better organized families of schizophrenics rather than toward the more disorganized.

The material which is being collected is complex and its analysis is difficult and time consuming. A year ago we reported briefly our initial survey of the fathers in 12 of these families (7) calling attention to the serious psychopathology found in the fathers of schizophrenic patients, which had previously been generally neglected because of the focussing of attention upon the early mother-child relationship and the pathology of the mothers. Today we report briefly on another fragment of the work in progress, namely on the defects in the marital relations of parents of schizophrenic patients. The topic is selected because, like the psychopathology of the fathers and mothers, the marital difficul-

¹ From the Dept. of Psychiatry, Yale Univ. School of Medicine, New Haven, Conn.

² This project is supported by grants from the National Inst. of Mental Health.

ties stand out in bold relief; and also because these marital problems are basic to the study of the intrafamilial milieu. The potential relationship of these parental difficulties to the maldevelopment of the children will have to remain largely implicit in this paper.

From past experience, we know that we must emphasize as strongly as possible that we do not seek to establish a direct etiologic relationship between marital discord between parents and the appearance of schizophrenia in an offspring. It is obvious that bad marriages do not, in themselves, produce schizophrenic children. The presentation is simply one of a series of efforts to convey various facets of the family environment as they become apparent in our study. It is not a matter of conjecture but observation, amply documented, and it is unlikely that it does not have some relevance to the problem of schizophrenia.

The deficiencies in the relationships between parents of schizophrenic patients have been noted and studied by relatively few investigators. Lidz and Lidz(6), in 1949, called attention to the frequency of broken homes, markedly unstable parents, and unusual patterns of child rearing, and found that at least 61% of 33 patients had come from homes marked by strife. Tietze(12), in 1949, reported that 13 of 25 mothers of schizophrenic patients reported that their marriages were very unhappy but that the statements by 9 that their marriages were "perfect" did not stand up under investigation, for the marriages were strained and far from happy. Helen Frazee(3), in 1953, found that 14 of 23 parental couples were in severe conflict and none was "normal" or had "only moderate conflict," whereas 13 of the control parental couples were near normal or showed only moderate conflict. None of the parents of schizophrenic patients revealed any degree of marital stability, whereas well over one-half of the control group manifested only moderate conflict or had made a good marital adjustment. Gerard and Siegel(4) (1950) found open discord between 87% of the parents of 71 male schizophrenics as against 13% in the controls. Reichard and Tillman(10) cite the unhappy marriages of the parents of schizophrenics and analyze the

sources of discord in terms of parental personalities. Of interest, too, is Murphy's report(8) (1952) of the family environment of 2 adopted children who became schizophrenic, in which the marital relationship was filled with hostility and mutual recrimination between two seriously disturbed parents. Many individual case reports emphasize or mention the bad marital relationship between the parents.

In our efforts to study and describe marital relationships, it has become apparent—as it has to others—that one cannot adequately describe a family or even a marriage in terms of the personalities of each member alone. A family is a group and requires description in terms of group dynamics and the interaction among its members. We are indebted to Parsons and Bales and their co-workers(9); to J. Spiegel and F. Kluckhohn(11); Nathan Ackerman(1); Reuben Hill and his co-workers(5); Bradley Buell and the Community Research Associates(2), and others for their efforts to analyze marital and family interrelationships. We are still searching for suitable frames of reference, but the deficiencies of descriptive method should not blur the basic consideration—that the parental relations are highly disturbed in all of the 14 cases whose study is nearly finished, as well as those which are still incomplete.

The requisites for successful marriages are unfortunately far from clear, but some essentials are emerging. A couple must find reciprocal interrelating roles with each other and in their respective roles with their children. Absence of such role reciprocity means making constant decisions, self-consciousness and tension. As Spiegel(11) has pointed out, role reciprocity requires common understanding and acceptance of each other's roles, goals and motivations, and a reasonable sharing of cultural value orientation. Mutual trust and effective communication between partners are important requisites given effect by support of the spouse's role and self-esteem during periods of loss of confidence. We have been particularly impressed by the need to maintain lines between generations: **that is, not to confuse or blur distinctions between parents and children.** Spouses cannot remain primarily in a dependent position to

their parents to the exclusion of an interdependent marital relationship; nor can one behave primarily as the other's child; nor as a rival with one's own children for the spouse's attention, nor reject a parental role completely (9). The need for both parents to form sources of primary love relationships for children and objects for stable identification will not be entered upon here, as we are concerned primarily with marital interaction.

It seems helpful to follow the lead of Parsons and Bales (9) and consider the father's role in the family as primarily "adaptive-instrumental" and the mother's as "integrative-expressive." In broad terms, which may differ somewhat from Parsons', the father supports the family, establishes its position with respect to other families, determines prestige, and the social patterns of interaction with other groups. The mother's basic functions pertain to intrafamilial interactions; tensions and their regulation; supplying the oral needs, both tangible and affectional. Each parent, in addition to filling his own role, must support the role of the other through his or her prestige, power, and emotional value to other family members.

The marriages of these parents of schizophrenics are beset by a wide variety of problems and ways of adjusting to them. However, the 14 marriages can be placed in 2 general groupings, which, of course, tend to overlap in places. Eight of the 14 couples have lived in a state of severe chronic disequilibrium and discord, which we are calling marital schism. This paper will focus primarily upon these 8 couples. The other 6 couples have achieved some state of relative equilibrium, in which the continuation of the marriage was not constantly threatened; and the marital relationship could yield some gratification of needs to one or both partners. However, the achievement of parental satisfaction or the sacrifices of one parent to maintain marital harmony resulted in a distorted family environment for the children.

MARITAL SCHISM

In the 8 families in which the state of disequilibrium designated as marital schism existed, both spouses were caught up in their own personality difficulties, which were ag-

gravated to the point of desperation by the marital relationship. There was chronic failure to achieve complementarity of purpose or role reciprocity. Neither gained support of emotional needs from the other; one sought to coerce the other to conform to his or her expectations or standards, but was met by open or covert defiance. These marriages are replete with recurrent threats of separation, which are not overcome by efforts at re-equilibration, but through postponement of coming to grips with the conflict or through emotional withdrawal from one another—but without hope or prospect of improvement or ever finding any gratification in the marriage. Communication consists primarily of coercive efforts and defiance, or of efforts to mask the defiance to avoid fighting. There is little or no sharing of problems or satisfactions. Each spouse pursues his needs or objectives, largely ignoring the needs of the other, infuriating the partner and increasing ill-will and suspiciousness. A particularly malignant feature in these marriages is the chronic "undercutting" of the worth of one partner to the children by the other. The tendency to compete for the children's loyalty and affection is prominent; at times to gain a substitute to replace the affection missing from the spouse, but at times perhaps simply to hurt and spite the marital partner. Absence of any positive satisfaction from the marital relationship (excluding the children) is striking, though strong dependency needs may be gratified in a masochistic fashion in a few instances. Mutual distrust of motivations is the rule and varies only in the degree with which realistic causes for mistrust extend into the paranoid.

In 7 of these 8 families, the husband retains little prestige in the home and with the children, either because of his own behavior or his wife's attitudes toward him. He becomes an outsider or a secondary figure who cannot assert his instrumental leadership, and when he strives to dominate in tyrannical fashion, he eventually forces the family to conspire to circumvent him. His instrumental role is basically limited to financial support, which he may have originally considered as a husband's basic function, or he is relegated to this position. The ineffectual

role of the father applies equally to 5 of the 6 marriages in the other group in which marked schism is not present.

The wives will be considered only in respect to their wifely functions, excluding the complex maternal relationships which also cause marital discord because eccentric, cold, rigid, or over-indulgent attitudes toward the children antagonized the husband. All distrusted their husbands and had no confidence in them. They were openly defiant in major areas of interaction and rather habitually disregarded or circumvented their husbands' demands. They were emotionally cold and distant and, with one or two exceptions, sexually aloof. They competed for the attention and affection of the children and tried to instill their value systems, which differed from those of their husbands.

Communication in these marriages is greatly impeded by mutual withdrawal and by masking of motives from one another, but is further hindered because 4 wives show seriously scattered thinking and 4 husbands show paranoid thinking and rigidity. The imperviousness to the feelings of others, characteristic of many parents of schizophrenics, also creates communicative difficulties.

It seems of interest that in 5 of the 8 marriages, the focus of the partners' loyalties remained in their parental homes, preventing the formation of a nuclear family in which the center of gravity rests in the home. The grandparents or the parental siblings often carried out much of the expressive and instrumental roles rather than the marital partners. The cardinal emotional attachment and dependency of one or both partners remained fixed to a parental figure and could not be transferred to the spouse.

The 8 families can be grouped into 3 categories, according to the groupings of the Community Research Associates in their "Classification of Disorganized Families," which describes 10 combinations of masculine and feminine personalities which are potentially hazardous to successful marital and family relationships(2).

Four marriages seem best described as "Man Dominated Competitive Axes." The husband strives to assert his male dominance to a pathologic degree, rather clearly in re-

action to his feminine dependent strivings. He needs an admiring wife who supports insatiable narcissistic needs and complies with his rigid expectations, and is angered when she reacts with defiance and disregard. Indeed, her inadequacies as a wife or mother may well produce exasperated frustration. He distrusts her increasingly and undercuts her prestige with the children. The wives are disappointed and disillusioned in the father figure they married who cannot grasp their needs, and, if they are overwhelmed by force, they manage to gain their ends through circumvention. The husbands are rigid paranoids or obsessives, and the wives are poorly organized obsessives or schizophrenics. The marriages are marked by chronic severe mistrust without (except in the least serious instance) any semblance of affection. The family is split into 2 factions by the conflict and mutual undercutting. Although both members are fighting, it is the husband's moral brutality, his disregard and contempt for the wife whom he tries to force into compliance that dominates the picture.

Mr. Reading, a forceful and successful but paranoically suspicious man, sought to control his wife's behavior from the start of the marriage. He was infuriated and disillusioned when she joined a church group against his orders to remain aloof from any organizations. He was dependent upon his mother, who lived in the home for many years; following her advice in household matters in opposition to his wife's, whom he considered incompetent to furnish the house. Marked strife began with the birth of the elder of 2 daughters, for he was clearly jealous of the attention the wife paid the child. He disapproved of everything she did in raising the child, often with good reason, but he competed rather than supported. Mrs. Reading was obviously overprotective of the children, whereas her husband wished to injure them to the hard knocks of life. Violent scenes, filled with Mr. Reading's dire threats and marred by occasional violence, were commonplace. The marriage further disintegrated into a hostile battleground after Mrs. Reading discovered that her husband was having an affair, which she reported to her mother-in-law to gain an ally her husband feared. Mr. Reading never forgave his wife for this betrayal and, apparently to spite her, sold their home in the best section of the city to move into a 2-family house in an undesirable neighborhood. Thus, he struck a foul blow at Mrs. Reading's major preoccupations, her social aspirations and her insistence that her daughters associate with only "proper" companions. The family, previously split into 2 groups, now united against Mr. Reading and refused to eat

meals with him. The difficulties engendered by the wife's indecisive obsessiveness and the husband's paranoid trends cannot be depicted here. Both partners used interviews primarily to incriminate the other and persuade the interviewer to judge in their favor against the spouse.

The second group of 2 families may be categorized as "Woman Dominated Competitive Axes," according to the "Classification of Disorganized Families(2)." The outstanding common feature is the wife's exclusion of the passive and masochistic husband from leadership and decision making. She derogates him in word and deed and is emotionally cold and distant to him. Her attention is focused on her narcissistic needs for completion and admiration. These wives are extremely castrating and their husbands are vulnerable. The husband withdraws from the relationship in an effort to preserve some integrity when defeated in the struggle, and may find solace in alcohol. The husband's function in the family is restricted to providing a living or, if willing, to supporting the wife in her domination of the family. The wife does not fill an expressive, supportive role to her husband and her expressive functions with the children are seriously distorted.

Both Mr. and Mrs. Farrell were closely tied to their parental families. Mrs. Farrell, the youngest of 3 sisters, was very dependent upon her eldest sister, a masculine aggressive woman with open contempt for men, who tended to dominate the Farrell household. Mrs. Farrell refused to live at any distance from her family and spent 2 months each year with them away from her husband. She was an extremely cold, narcissistic woman and a "tease," who flirted constantly but denied her husband sexual relations. Mr. Farrell was a passive man who sought to assert a pseudo-dominance of his family when his men friends were absent. He formed fawning attachments to men, which increased his wife's contempt for him. He was excluded increasingly from the family circle, his opinions disregarded, and felt like an outsider who was barely tolerated. He was closely attached to his mother, whom he helped to support. Mr. Farrell finally took steps to separate unless his wife would detach herself from her sisters. She capitulated but became pregnant in the process of reconciliation. She was ashamed and concealed the pregnancy, and then took it out on her husband. Separated from her sister, she began to drink heavily and carried on open flirtations, or perhaps affairs, neglecting her baby. The husband was pleased. After Mrs. Farrell was seriously disfigured in an accident for which her husband was responsible, she be-

came depressed and withdrew into seclusion until plastic surgery restored her appearance. Mr. Farrell then tried to make amends through becoming a weak and spineless husband who mothered the youngest neglected child. However, he soon developed cancer and his wife displayed a physical abhorrence for him, fearing that she might catch the disease. She refused to nurse him during his terminal illness.

The remaining 2 marriages may be classified as "Dual Immature Dependency Axes." Mutual withdrawal of the spouses and dependency on members of the parental families was outstanding. It is difficult to say which spouse dominated the marriage, though both tried and at the same time resented not having a strong figure who would provide leadership. Resentment of the mates' attachments to their families was prominent. The inability to gain mutual gratification of needs and support led to mounting disregard of the other and increasing emptiness of both lives. These marriages were replete with threats of separation by both members, but each tended to go his or her own way, undermining the other to the children by deeds and attitudes more than by words. Despite the long duration of both marriages, they remained tentative, as if both partners were awaiting and contemplating release.

The Nussbaum's dissension had started shortly after their marriage 25 year ago. Mr. Nussbaum had been largely supported by his elder brother, whom he regarded as a father. Mrs. Nussbaum's father had been fatally injured following business reverses, which her family blamed upon his affiliation with Mr. Nussbaum's brother. Mrs. Nussbaum appeared to side with her family in their accusation of her husband's brother. Mr. Nussbaum considered her attitude to show utter disloyalty as it furnished the finishing blow to his feelings of being excluded by her close-knit family. There was little or no discussion of the matter, but they drew apart. Mrs. Nussbaum was very sensitive lest her husband dominate her, and stood her ground with the help of a violent temper. She refused to accompany him on social engagements essential to his career and antagonized his friends. Mr. Nussbaum felt unloved and unwanted and constantly deprecated. He stayed away from home much of the time, and fostered the impression that he was having affairs, either to spite his wife or to mask his impotence, or both. Weeks would pass when the couple would not speak to one another. The wife found solace in her relationship to her son, and the husband in his seductive attachment to his daughter, our patient.

Although the Newbergs had been in violent disagreement and there had been repeated threats of separation, some elements of good will toward each

other could be uncovered. Mr. Newberg is a very disturbed man, pushing numerous impractical schemes that are often grandiose; talking incessantly in a loud voice; seeking to dominate but with faulty judgment and, although a steady and hardworking provider, he had frightened his wife for years lest he leave his job and launch upon one of his impracticable schemes. He spent little time with his family, partly because of his attachment to his mother and partly because of his wife's attachment to her sisters, which forced the family to live in a home 2 hours from his job. Mr. Newberg resented his wife's attachment to her 3 sisters and mother, and her domination by one sister who constantly disparaged him to his wife and children. Mrs. Newberg claimed that she remained dependent upon her sisters because her husband provided her neither emotional support nor help in raising the children. She considered him impossible to live with because of his demands, his thoughtlessness, and the constant confusion he produced in the home. She remained with him only because she felt the children needed a father but found she had to treat him as a child, humoring him to avoid strife. They blame each other's families for interfering and discourage and disparage each other's interests. The situation reached a crisis when Mr. Newberg wished to move to the west coast because his mother and brother were moving there. He threatened to leave his wife if she would not move and she threatened to leave him if he tried to force the move. Both had intense needs which the other could not begin to satisfy. Although Mr. Newberg had strong paranoid trends and Mrs. Newberg had difficulties in being close, and the hostility was marked, this family offered the best chance of any for some reconciliatory movement, because both showed potential ability to recognize the other's needs as well as their own difficulties.

The portrayals of these marriages are little more than symbolic fragments of the wealth of material collected. Still, they indicate the virtual absence of complementarity in each marriage. Husband and wife do not support each other's needs and the marital interaction increases the emotional problems of both, deprives the spouses of any sense of fulfillment in life, and deteriorates into a hostile encounter in which both are losers. Instead of any reciprocal give and take, there is demand and defiance leading to schism between partners that divides the entire family, leaving the children torn between conflicting attachments and loyalties.

MARITAL SKEW

In 6 of the 14 marriages, this type of schism did not exist, although the family

life was distorted by a skew in the marital relationship. In all, the rather serious psychopathology of one marital partner dominated the home. In some, the dissatisfaction and unhappiness of one spouse is apparent to the other and to the children, but husband and wife manage to complement or support each other sufficiently to permit a degree of harmony. In the others, the distorted ideation of one partner was accepted or shared by the other, creating an atmosphere of *folie à deux*, or even of *folie à famille* when the entire family shared the aberrant conceptualizations.

In all of these families, one partner who was extremely dependent or masochistic had married a spouse who had appeared to be a strong and protecting parental figure. The dependent partner would go along with or even support the weaknesses or psychopathologic distortions of the parental partner because dependency or masochistic needs were met. In contrast to the marriages with overt schism, one partner could gratify rather than combat a spouse's narcissistic needs. It may be significant that no member of these 6 marriages had intense emotional bonds to the parental family, and it is possible that the absence of such alternative sources of gratification tended to hold these spouses together. A striking feature in all cases was the psychopathology of the partner who appeared to be dominant, creating an abnormal environment which, being accepted by the "healthier" spouse, may have seemed to be a normal environment to the children. Considerable "masking" of potential sources of conflict occurred, creating an unreal atmosphere in which what was said and admitted differed from what was actually felt and done. Two and perhaps 3 of the marriages may be classified as "Woman Oriented Self-depreciatory Axes," according to the Classification of Disorganized Families(2), in which the wife's masochistic self-sacrifice to support a narcissistic and disappointing husband was striking. One, and perhaps 2 of the marriages could be designated as "Man Oriented, Self-depreciatory Axes" in which a husband with a meek and self-effacing disposition supported a wife who was an ambulatory schizophrenic.

We shall cite examples in cursory fashion, primarily to illustrate that even though these marriages provided some gratification to the marital partners, the family milieu was as distorted and disturbed as in the case of the schismatic marriages.

The Schwartz family was completely dominated by a paranoid mother who supported the family. Her husband had left her on one occasion, unable to tolerate her demands, but had returned long before the patient, the youngest son, had been born. Soon thereafter the father suffered a nervous breakdown, after which he lived as a sort of handyman around the house and worked as a menial helper in the wife's business. The wife was extremely ambitious for her 4 sons, pushing them and dominating their lives, as well as making it clear that they must not become like their father. She was paranoically fearful of outsiders, believing that their telephone was tapped and that the family was physically endangered because they were Jewish. A severe schism actually existed despite the peace between the marital couple. The mother was intensely protective of her oldest son, a gambler and embezzler, who consumed all of her attention as well as much of the family income. A chronic ambivalent conflict existed between them that tended to exclude the husband and the other sons. The husband did not intervene, but merely told his sons that the trouble in the family existed because they did not obey their mother as he did.

Here the father had abdicated and the mother was a paranoid instrumental leader, while the father supplied no masculine image with whom the younger sons could identify.

Illustrative of the *folie à deux* and the *folie à famille* group, the Dollfuss family lived as European landed gentry in a New England suburb, isolated from their neighbors. The family life was centered in the needs and opinions of Mr. Dollfuss, a successful but paranoically grandiose inventor. The children were raised by a seductive nursemaid of whom the cold and distant mother was intensely jealous. However, Mrs. Dollfuss devoted her life to her husband, catering to his whims, and keeping the children out of his way. Mr. Dollfuss' major interest was an oriental religious sect. He believed that he and a friend were among the few select souls who would achieve a particular type of salvation. Both Mrs. Dollfuss and the nursemaid virtually deified him. They and the children shared his beliefs as well as his grandiose notions of himself, living in what we termed a *folie à famille*. Here, the children were largely excluded from the lives of the parents, the model of the father was an unrealistic one for the son, and the intellectual and emotional environment was estranged from that of the larger culture into which they had to emerge.

In all of these 6 families, the fathers were particularly ineffectual, assuming little re-

sponsibility for family leadership other than earning a livelihood. They were either weak, ineffectual men who went along with wives who were schizophrenic or at least questionably so, or they were disturbed men who could maintain an outward form of capability and strength because of the support of a masochistic wife. In all instances, the psychopathology that pervaded the home was masked or treated as normal.

The analysis of the pathologic environment in these last 6 cases, and of the effects upon the children, cannot be gone into here, but I trust we have shown that we have not simply discarded less disturbed family environments in choosing to focus this paper upon the 8 marriages in which overt schism between the partners existed. In considering the 8 schismatic marriages we do not seek, as emphasized previously, to relate directly the appearance of schizophrenia in an offspring to the marital disorganization. There are many other factors in the family environment which we are studying that affect the children, but they all bear some relationship to the personalities of the parents and the atmosphere created by their interaction. We are only seeking to describe bit by bit what this family environment is like, until we can assemble the fragments into a meaningful description of the whole. We are still occupied with the grossest factors, for unless we start with what appears fairly obvious, these factors may be overlooked during our preoccupation with subtleties. In this presentation, we have paid minimal attention to the individual personalities of the parents in order to concentrate upon problems created by their interaction.

DISCUSSION

We find a number of features in these marriages that are theoretically adverse to the "normal" developmental process of a child. In these families each parent constantly denigrates and undercuts the other, making it clear to the children that each does not respect or value, but rather dislikes or hates the other. Each parent more or less openly expresses fears that a child will resemble the other, and a child's resemblance to one parent is a source of concern or rejection by the other parent. One

or both parents seek to win the child away from the other. The boundary between the generations is violated. A child may feel the burden of being expected or required to complete the life of one or both parents; and this creates a block to growth into an independent individual. A child may be used and needed as a replacement for the spouse. There is excellent opportunity for intensification of the Oedipal rivalry rather than for its resolution. The child can insert himself in the wedge between the parents, becoming inordinately adept at widening the breach and becoming caught in the incestuous concern that the parent can be seduced or might seduce, as well as in the guilt over hostile-destructive impulses toward the other parent. A parent of the same sex with whom the child should identify during latency and adolescence who is not an acceptable love object to the other parent but is hated and despised, cannot provide a model through which a child can achieve mature identity. Potential homosexual trends, which play a large role in schizophrenia, are opened. Many other serious impediments are placed in the way of the child's achievements of a stable identification with a parental figure, a requisite to the formation of a stable ego-identity by the end of adolescence. In addition, children of a rejected marriage are likely to feel rejected themselves. Caught in the anxiety that a needed parental love-object can be lost through separation of the parents, the children may devote much energy toward balancing the precarious marriage. The stronger the incestuous tendencies, the greater the need for protection by the presence of both parents. When one or both parents have paralogic and scattered ways of thinking and behaving, the difficulties are further heightened.

SUMMARY

The careful scrutiny of the 14 families containing schizophrenic offspring reveals

that the marital relationships of all parents were seriously disturbed. Eight of the families were split into 2 factions by the overt schism between the parents. In these schismatic families the parents repeatedly threatened to separate; one spouse sought to coerce the other to conform to rigid expectations and aroused defiance; difficulties of almost any type engendered recriminations between parents rather than mutual support. The parents derogated and undercut one another, and thus the child could not use one parent as a model for identification or as a love object without antagonizing the other parent. The other 6 couples lived together in reasonable harmony, but the family environments provided by their marriages were badly distorted or "skewed" because in each marriage the serious psychopathology of the dominant parent was accepted or shared by the other. Studies now in progress will seek to clarify further the difficulties in these marriages, the personalities involved, and the effects upon the children.

BIBLIOGRAPHY

1. Ackerman, N. *Social Casework*, 35, April, 1954.
2. Buell, B., et al. *Classification of Disorganized Families for use in Family Oriented Diagnosis and Treatment*. New York: Community Research Associates, Inc., 1953.
3. Frazee, H. E. *Smith Coll. Studies in Social Work*, 23: 125, 1953.
4. Genard, D. L., and Siegel, J. *Psychiat. Quart.*, 24: 47, 1950.
5. Hill, Reuben, et al. *Eddlyville's Families*. Inst. for Res. in Soc. Sc., Chapel Hill, N. C., 1953.
6. Lidz, R. W., and Lidz, T. *Am. J. Psychiat.*, 106: 332, 1949.
7. Lidz, T., Parker, B., and Cornelson, A. R. *Am. J. Psychiat.*, 113: No. 1, July, 1956.
8. Murphy, B. *Psychiat. Quart.*, 26: 450, 1952.
9. Parsons, T., and Bales, R. *The Family*. Glencoe, Ill.: Free Press, 1955.
10. Reichard, S., and Tillman, C. *Psychiatry*, 13: 247, 1950.
11. Spiegel, J. P. *Psychiatry*, 20: 1, 1957.
12. Tietze, T. *Psychiatry*, 12: 55, 1949.

THE PHYSICIAN AND TESTAMENTARY CAPACITY¹

GENE L. USDIN, M.D.²

The accumulation of property often is a reward for intelligence, industry and opportunity. Its acquisition is not only a source of pleasure, but a potent factor in the evolution of a progressive civilization and culture. The need of an individual to identify with and attempt to secure happiness for his progeny, other relatives and valued friends as well as to contribute to causes, foundations and institutions is one of the signs of a healthy personality. Provided the testator complies with the limitations imposed by law, the courts jealously guard this right to dispose of property as the owner sees fit. Testamentary capacity, the legal rules concerning the competency of a person to make a valid will, is one of the prerequisites. The physician, in the role of expert witness, is frequently called to evaluate testamentary capacity. Participation of the physician in court actually is a fairly simple matter requiring only the presentation of medical knowledge in a non-partisan and non-technical manner. Some branches of legal medicine (principally psychiatry) require special understanding of legal standards. Medical experts too often neglect the relatively brief preparation required to ascertain criteria that the court expects the medical expert to apply in the particular situation.

A leading Louisiana case(1) seemed to connote the basic humanistic issue involved when it gave the following rule in 1880:

The real question is, whether the brain or other physical organ . . . through which the action of the mind is manifested, is so diseased or impaired as to make it an untrustworthy vehicle for the conveyance of the true wish or will of the testator, unbiased by any delusion which may be the result of such disease.

The purpose of this paper is to review the psychiatric aspects of legal propositions involved in evaluating testamentary capacity.

Ideally this evaluation falls into the province of the psychiatrist, but often the determination of testamentary capacity arises after the testator has died and therefore is one of hind-sight; physicians attending the patient during the period of the writing of the will, whether they be general practitioners, surgeons, internists, etc., become the main medical experts. Also some smaller communities do not have psychiatrists.

Our laws, in attempting to protect the sanctity of testamentary capacity, have placed it in a type of Valhalla; they recognize the right of an individual to dispose of his property as he personally wills as a paramount privilege that our society should guarantee. To invalidate a will is more difficult than to void a contract or to have an individual declared insane or criminally irresponsible. The voiding of a will can be accomplished on but 3 grounds: lack of testamentary power, lack of testamentary capacity or the presence of undue influence. Concisely stated, undue influence invalidating a will is that which substitutes the wishes of another for those of the testator(2). This factor has been utilized frequently, has prescribed fairly precise conditions, and when appropriate seems to have considerable merit for use in contesting a will. In at least one state, Louisiana, undue influence is not recognized as grounds for invalidating a will(3) although that state recognizes the principle of the doctrine, at least in part, by the limitation of bequests to physicians and ministers attending the patient during the terminal illness(4). Testamentary power, which is defined as the privilege or right of a person to dispose of his property by will(5), is created by statutes, is within legislative control and lies solely within the province of the law. These statutes vary from state to state and nation to nation; they prescribe specific conditions under which a will may be considered a legal document, and no court has the power to dispense with any of the prescribed requisites of its particular jurisdiction.

Various attempts have been made to estab-

¹ Presented at the Southern Psychiatric Association Meeting, Washington, D. C., October 2, 1956, and the Eleventh Annual Meeting of the Law Institute, Jackson, Miss., December 7, 1956.

² Department of psychiatry, Tulane School of Medicine and Touro Infirmary, New Orleans, La.

lish arbitrary standards of testamentary capacity. Before the evolution of present day concepts, 3 fairly well delineated states in the history of the law governing testamentary law are discernible. The initial period would seem to date from earliest court decisions on record down to 1848. During this period each contested will involving testamentary capacity was determined on its own merit and based on the thought of the specific court in which the case was tried. Accordingly wide latitudes prevailed. In 1848 Lord Brougham of England promulgated his decree (6) which had far reaching consequences. It stated that mental disease was so subtle and intangible that no legal tribunal could safely undertake to define its degree, and the only wise course was to hold any degree of insanity as unfitting to testamentary capacity. During this same period, American law adopted a different concept which made the mere possession of understanding sufficient to establish testamentary capacity. Such a low standard for establishing testamentary capacity resulted in one court stating that "weak minds differ from strong minds only in degree; unless they betray a total loss of understanding or idiocy or delusion, they cannot possibly be considered unsound (7)."

In 1870, Lord Chief Justice Cockburn of England made his epoch making decision (8) which still stands as the basis for the modern legal concept of testamentary capacity. His basic proposition concerns the saneness or insaneness of the testator for the purpose of making a will at the specific time the will is written. The essence of his rule states that the person making the will knows that he is making a will, knows the nature and extent of his property and knows the natural recipients of his bounty. Any attorney or psychiatrist who deals with last wills and testaments would do well to review the full text of Lord Cockburn's opinion. This excellent but somewhat loose principle has undergone modifications and elaborations by nearly all 48 states and the District of Columbia. Different interpretations actually have been provided at various times in the same state.

With these somewhat broad and ambiguous criteria, the medical expert has to render an opinion regarding testamentary capacity.

While this may appear somewhat appalling, it should be borne in mind that if the medical expert understands the psychiatric status of the patient, especially at the time the will was made, and if he bears in mind the 3 generally accepted criteria of testamentary capacity, he will not only be of aid to the court but also will make a most satisfactory court appearance. He should be prepared to accept the fact that all too often the courts neglect reputable medical testimony when it is contradictory to non-medical testimony. Case after case can be found where the court has paid absolutely no attention to the opinions of the experts because the behavior of the testator as detailed by lay witnesses pointed in the opposite direction (9). Courts have frequently castigated medical opinions regarding testamentary capacity (10, 11, 12).

The writer recently appeared in a case (13) in which 4 medical experts including 2 physicians who attended the patient during the period when the will was written, testified that in their opinion the testatrix was unable to fulfill the accepted criteria of testamentary capacity. Both sides had numerous lay witnesses, but the side seeking to uphold the will produced no medical experts. The trial judge upheld the will. It was not until after a petition for rehearing had been granted that a compromise was achieved whereby the side seeking to invalidate the will was granted 30% of the estate in contest.

The psychiatrist encounters theoretical concepts which are difficult for him to accept, e.g., some courts have held that a person may be competent to dispose of a small estate among a few individuals by simple gifts, and yet be incompetent to dispose of a large estate among a great number of persons by complex and involved conditions (14, 15, 16). The psychiatrist, in applying knowledge of human behavior and intellect, finds this viewpoint completely tenable. However, other courts have contradicted this view, stating that testamentary capacity is one of capacity to make a will, not to make the particular one offered for probate (17). In trying to understand the rationale of this latter opinion, the psychiatrist can only become perplexed and attribute some legal opinions to the fact that law is a retrospective discipline based upon previous decisions. There are

definite values in the law being a discipline which changes cautiously and slowly. Its conception of human behavior has not yet caught up with prevailing psychiatric thought.

The function of the medical expert is to apply his training and experience in considering functional and somatic illness in the light of criteria for testamentary capacity. It should be kept in mind that there are numerous physical conditions that may cause either transient or permanent mental incompetency. There are several psychiatric illnesses that permit a psychotic person to have more lucid intervals during which his intellectual capacity is significantly increased. A person may be psychotic or may be in an institution for many years, but still may be able to fulfill the requirements for testamentary capacity. The important factor to be considered by the medical expert is whether or not any essential element of testamentary capacity is impaired by the illness. The majority of cases in which testamentary capacity has been questioned occur in a fairly small group of conditions. These conditions frequently intermingle.

The diseases of old age constitute the largest group of conditions upon which testamentary capacity can be attacked. With an ever increasing number of people exceeding the Biblically allotted span, this group will constitute a continuously larger percentage. Extreme old age does not of itself disqualify a person from making a valid will. Old age becomes an important evidentiary fact only when found in connection with mental incompetency. Numerous cases can be found upholding agreements and wills made by individuals in advanced years. One such case noted is that of a 94-year-old testator whose last will was upheld (18). Another will which was upheld was made by a 96-year-old testator who died 4 years later (19). Still another concerns a testator who made a valid will at the age of 101 (20).

Most physicians appreciate that senility is not a chronological fact. It varies with the individual's physiological status, with the personality, with environmental factors and with superimposed emotional illness. Sigmund Freud was active and productive until a few weeks before he died at the age of 83.

It was during the last year of his life that he published what many consider one of his most monumental works, "Moses and Monotheism." Justice Oliver Wendell Holmes was active in the United States Supreme Court at the age of 91. Titian painted one of his greatest masterpieces at the age of 98. Michel-Eugene Chevreul, who died in 1889 at the age of 103, presided at meetings of the Academy of Science in Paris at the age of 85 and was active in scientific circles at the age of 100 (21).

The difference between senility and senile dementia is frequently only a shade, yet the psychiatrist often has the responsibility to differentiate the conditions. Some states (e.g., Louisiana) consider that "Where the medical testimony shows that the testatrix was suffering from senile dementia she is considered *mente captus* and is presumed incapable of a lucid interval (22, 23)." The psychiatrist, in having to determine the point at which simple senility ends and senile psychosis begins, has to make a decision that not only might be considered an anthropological and philosophical one, but one in which opinions of physicians vary markedly. In one recent case involving testamentary capacity in which the author participated, the testatrix was a 78-year-old widow who had made holographic wills 5 and 6 years prior to her death in October of 1953 (24). She spent the last 13 months of her life in a mental hospital, during which time she was a deteriorated and demented individual. The family physician who had treated her for the last 15 years of her life had noticed marked mental and physical changes which began in 1942. The legal question concerned the testatrix's capacity for making the wills of 1947 and 1948. There was a substantial history of disorientation, eccentric behavior, depressive episodes, possible paranoid ideation, frequent expressions of being mortally afraid of the major beneficiary of her will and marked recent memory defects. One factor of the decision in the case rested upon the determination of whether her symptoms were those of a senile individual or of a senile psychotic at the time the wills were written. Arrayed on the side seeking to invalidate the will were the family physician, two psychiatrists who had been in charge of the pa-

tent's terminal hospital course and a third psychiatrist who was being utilized as an additional expert. The side seeking to uphold the will placed on the stand a psychiatrist who had seen the patient briefly during the terminal hospitalization and an internist who had never seen the patient; for further consultation they had the services of another psychiatrist who helped in the framing of the medical portion of their case. It is easily understandable how two such factions can exist, but it is unfortunate that such courtroom disagreements tend to undermine the court's and public's opinions not only of the competence, but also of the integrity of physicians.

The lengths to which courts go to protect a simple senile person's right to make a will is best emphasized by citing one court's recent statement that "... Neither old age, nor its infirmities, including untidy habits, partial loss of memory, inability to recognize acquaintances and incoherent speech will deprive a person of the right to dispose of his own property (25)."

A fine point for the psychiatrist can be the differentiation of senile dementia from cerebral arteriosclerosis if such differentiation is possible. Courts have recognized that cerebral arteriosclerosis is not identical with senile dementia (25). It is important to keep in mind that senile dementia is a progressive disease without better or "more lucid" intervals, whereas the arteriosclerotic may have better and worse days or periods. Accordingly one would anticipate that some cerebral arteriosclerotics may on certain days be able to fulfill the criteria of testamentary capacity, whereas on other days they may be unable to do so.

Alcoholism and drug addiction are other illnesses which often give rise to a contest of capacity. Here again the important issue is the ability of the individual to satisfy the criteria of testamentary capacity on the day the will was made. A person may be a chronic alcoholic but still possess testamentary capacity on less intoxicated or non-intoxicated days. Still other individuals may have no known or significant alcoholic problem, but on the day the will is drawn they may have been so intoxicated that the will cannot be considered valid. Simply stated,

alcoholism or drug addiction to vitiate the testamentary act must be such that the testator at the time of the execution of the will was so overwhelmed by the toxic substance that he was rendered incapable of fulfilling the criteria of testamentary capacity; or alcoholic or drug consumption must have been indulged in for such duration as to produce permanent degeneration of the brain.

The toxic psychoses associated with altered body physiology during various somatic illnesses can invalidate a will if the realm of testamentary capacity is affected at the time the will was made. Thus a dying patient may be so confused, disoriented and agitated that he would be unable to make a valid will. All too often it is suddenly realized, with the patient on his death bed, that no will has been made, and frantic scurrying produces a document for the dying individual to sign. Under this stress, in addition to possibly being psychotic, the testator is not helped by the thought that this is his last will and testament. Undue influence is more likely in a person so weakened and defenseless. Many of the febrile deliria, altered states of blood chemistry (*e.g.*, uremia) or stupors associated with severe illnesses can alter mental equilibrium. In one recent case a group seeking to validate a will maintained that the testatrix was mentally incompetent, due to uremic delirium at the time she was seen by two psychiatrists and subsequently might have had a reduction in nitrogenous wastes to such an extent that the delirium was not present when she shortly thereafter made a will (26). It is especially in this group of conditions that the concept of lucid interval might be applicable and in which the acumen of the psychiatrist may be strongly tested. **The law recognizes that a will executed in a lucid interval by one who was before and afterward a "confirmed" lunatic is valid (27, 28, 29).** It is when the question of lucid interval is pertinent that it is especially advisable for the physician to be present at the specific time the will is being drawn up. Attorneys too often fail to utilize the opportunity of having a psychiatrist present at the time the will is made if they anticipate a contest possibly developing on the grounds of testamentary capacity. **Some attorneys may see this latter technique used as a possi-**

ble presupposition by the side contesting the will. The psychiatrist can also serve as an advisor to the attorney by pointing out when "more lucid" intervals can be expected for the particular testator, *e.g.*, the phenomenon of mental fatigue in senile individuals would make it appear advisable to execute the will early in the day. If the psychiatrist believes that the testator might have a "more lucid" interval at a later date, he might suggest a postponement of the drawing up of the will. It is important to remember that delaying the execution of the will can result in two major complications. The intended testator might die or might become less mentally competent.

Courts have recognized that many diseases or injuries if severe enough can cause permanent, or at least temporary, mental incompetence. Thus brain injuries, neoplasms of the brain and cerebral vascular disorders can render a testator incompetent to execute a valid will. It is a matter of history that Mrs. Fillmore, widow of President Fillmore, manifested symptoms of impaired mentality before she had an apoplectic stroke. She made 2 wills within 8 months of the stroke, but on a physician's testimony she was judged to be insane and incompetent (30).

Dementia paralytica in itself, does not void testamentary capacity (31), unless some essential of testamentary capacity is impaired. The same rule would seem applicable to chronic encephalitis, congenital brain anomalies and epilepsy.

Around the turn of the twentieth century considerable thought was given to the problem of aphasics making a will (30, 32, 33, 34). Bateman cites a case of an English aphasic who acted as mayor and municipal counselor, signed his mail with his left hand and also wrote his will which was recognized as valid by the courts (33). Bramwell (34) cited an especially interesting case of a patient suffering from motor aphasia and a right hemiplegia who indicated by pantomimic answers that she was able to make a will. The patient was asked to express "Yes" by nodding her head and squeezing the lawyer's hand and to express "No" by shaking her head. First she was asked whether she wanted to make a will, and then a list of possible recipients of her bounty was read

to her. She was then asked to answer "Yes" or "No" if she wished to bequeath anything to each of them. After the 4 close relatives were designated and the broad class of "anyone else" was established, she was asked to whom she wanted to leave her money. To her sister she indicated "Yes" and to the others she indicated "No." This was repeated several times. When she was asked whether she wanted to leave all her money to her sister, she again indicated "Yes" several times. The witnesses and medical experts also had the advantage of her facial expressions and manner and felt these were compatible with her answers. The aforementioned cases emphasize the necessity for initiative on the part of medical experts and attorneys in dealing with aphasics. Some aphasia sufferers sustain considerable intellectual deficits, others relatively little. The form of aphasia is of the greatest importance in establishing testamentary capacity, and each case must be decided on its specific pathology. For example, there are patients with aphasia who cannot comprehend the spoken word but can comprehend the written word. Doctors and attorneys having no intimate knowledge of aphasia can come too quickly to the conclusion that the patient is not in a fit mental condition to make a will. This is not particularly surprising, because it was not too long ago that aphasics were considered insane. With some ingenuity physicians and attorneys can help give the patient the opportunity to dispose of his property as he properly wills.

Eccentricity, bad manners and grotesque conduct in themselves are not evidence of insanity, especially where they are habitual in the testator (35). The eccentric person may make a valid will, notwithstanding the peculiarity of his conduct (36, 37).

The fact that a person believes in witchcraft, clairvoyance, spiritual influences, premonitions, mind-reading, transmigration of the soul or occult religions does not affect the validity of his will. A man's belief cannot be made the test of his sanity. Marked penitence (38), violent temper (39, 40), moral depravity (41, 42), religious fanaticism (38, 43) or eccentricity regarding health, wearing apparel, hobbies, table manners and language (44, 45) in themselves do not

render the testator incapable of making a valid will. The person may be obstinate, subject to strong passions and prejudices and unreasonable in his hostilities but yet not devoid of testamentary capacity. Belief in spiritualism does not necessarily affect the testator's knowledge of his relatives and his property (43, 45, 46). In instances where the testator labors under the delusion that the spirits of the dead or some other ethereal source is directing him in his business, specifically the will, a will may be considered invalid (47).

Delusions of marital infidelity are fairly frequent in severe mental illness. They are especially prone to occur in the involuntal psychoses and in senile psychoses. If the delusion can be shown to affect the natural recipients of the testator's bounty, the will must be considered invalid. Courts attempt to emphasize the distinction between the belief in a wife's unfaithfulness under external circumstances and a belief based on psychotic delusion. Thus one court has stated "... to justify the rejection of the will, it must be established that the false belief is a symptom of a deranged mind and not the result of an impression produced by extraneous circumstances. The burden is on the petitioner to prove the nonexistence of the extrinsic evidence on which the belief rested" (48). The irony of this is that a person may disinherit an individual on false information (e.g., false information regarding a wife's unfaithfulness) or undue inference from some observations, and the court will uphold the will. If the individual has a delusion regarding an anticipated recipient of his bounty and the delusion affects the will, then the will can be invalidated.

Delusions of grandeur or poverty are other types of aberrant behavior which may invalidate a will. Here the individual's inability to appreciate the nature and extent of his property is usually the invalidating factor. Insane delusions have produced many interesting cases. There is a case in Indiana in which the testator believed he could locate hidden treasure by means of a small metallic ball suspended from a thread (49). The testator spent considerable time going over fields trying to locate treasure and dug so many holes that he became a nuisance

and had to be stopped. Evidence of this behavior did not invalidate the will. To summarize, courts consider delusions as sufficient to destroy testamentary capacity when they cause a disposition differing from that which it might reasonably be found that the testator would otherwise have made.

Illiteracy in itself has no probative value for it does not necessarily indicate incapacity for understanding. It can many times, however, be indicative of mental deficiency. Mental deficiency can invalidate a will, but the deficiency would have to be of such extent as to vitiate one of the criteria of testamentary capacity. Average intellect is unnecessary; thus one might anticipate that some high grade morons could make a valid will whereas all idiots and imbeciles would be unable to do so. In one recent case, the court decided that an adult with the intelligence of a 5-year-old lacked testamentary capacity (50). Therefore intelligence testing of the possible mental defective can become an important procedure for the psychiatric evaluation of testamentary capacity. In serving the court the psychiatrist should be aware that legal definitions often differ from those of medicine, e.g., some court decisions have differentiated idiot and imbecile not on the basis of intelligence levels but on the basis of an idiot's "lacking mind from birth" and the imbecile's being "mentally deficient as a result of disease" (51)."

SUMMARY

The evaluation of testamentary capacity represents a field requiring serious psychiatric consideration. While considerable publicity and work have recently been afforded the problem of criminal responsibility, little can be found in recent psychiatric literature regarding testamentary capacity. There have been some noteworthy exceptions, and Davidson's clear, simple and concise chapter in his recent book (52) is a major contribution.

No court or tribunal can set up a standard by which mental capacity may be unerringly tested. No jurist or psychiatrist has indicated a precise point where sanity ceases and insanity begins. Perhaps it would be easier to decide the exact instant when dusk surrenders to darkness.

The psychiatrist faces the problem of proper expert testimony based on the application of psychopathology to criteria set by the law. These criteria may appear quite ambiguous or they may be satisfied in a manner which the psychiatrist may feel injustice is being done. The psychiatrist may be distressed by some of the discourtesies and the weight afforded his testimony.

The conditions under which testamentary capacity can be contested are fairly limited. The value of having the psychiatrist present at the time the will is being drawn up is important, especially when the premise of a lucid interval is to be utilized. In the majority of cases where wills are contested, the psychiatrist rarely has the opportunity to examine the testator and has to depend on the available history. He must obtain facts as best he can and render an honest opinion as to testamentary capacity. The lawyer's duty to his client is to give him the benefit of the best legal ability of which he is capable; so naturally a lawyer, consulting a psychiatrist, will try to present witnesses who primarily favor his side. Progress has been made in many states by the appointing of impartial medical experts for jury commissions and cases involving personal injury liability. It would be an important step to have such impartial opinion applied in cases involving testamentary capacity.

There is increasing awareness on the part of the legal profession of the real contributions which an understanding of behavioral mechanisms can make toward better conceptualization of the law and its procedures. Psychiatry is the medical specialty which has the closest contact with law. It too is directly concerned with the appropriate regulation of human behavior in a healthy manner. Psychiatry, however, is neither as pragmatic, authoritarian or precise as the law. Although present-day dynamic psychiatry recognizes the vital impact of the unconscious motivation of behavior, law leaves no place for such recognition although it is beginning to take hesitant steps in that direction.

REFERENCES

1. Kingsbury v. Whittaker, 32 La. Ann. 1055, 1067, 36 Am. Rep. 278, 291 (1880).
2. Redford and Booker, 166 Va. 561, 185 S.E. 879, 885 (1936), citing R.C.L.
3. Art. 1492, La. Civil Code.
4. Art. 1489, La. Civil Code.
5. Ballentine's Law Dictionary, ed. 2, Rochester, Lawyers Cooperative Publishing Company, 1948.
6. Waring v. Waring, 6 Moore C.P. (Eng.) 341.
7. Stewart v. Lisperard, 26 Wendell (N. Y.) 255 (1841).
8. Banks v. Goodfellow, L.R. 5 Q.B. (Eng.) 548.
9. Des Moines Nat. Bank v. Chisholm, 71 Ia. 675, 33 N.W. 234 (1887).
10. In re Collins' Estate, 174 Cal. 663, 670, 164 Pac. 1110, 1113 (1917).
11. In re Cookson's Estate, 325 Pa. 81, 188 Atl. 904 (1937).
12. In re Arnold's Estate, 16 Col.2d 573, 107 P.2d 25 (1940).
13. Succession of Yochim, Docket No. 337-909, Orl. Parish Dist. Ct., La., March 15, 1956.
14. Taylor v. Pegram, 151 Ill. 106; 37 N.E. 837 (1894).
15. Green v. Green, 145 Ill. 264, 33 N.E. 941 (1893).
16. Campbell v. Campbell, 130 Ill. 466, 22 N.E. 620, 6 L.R.A. 167 (1889).
17. Authorities cited in Dillman v. McDanel, 222 Ill. 276, 78 N.E. 591, 113 Am. St. Rep. 400 (1906).
18. Collins v. Long, 95 Ore. 63, 186 Pac. 1038 (1920).
19. In re Bose's Estate, 136 Neb. 156, 285 N.W. 319 (1939).
20. Wilson v. Mitchell, 101 Pa. 495 (1882).
21. Jastrow, J. Scientific Monthly, 44: 487, June 1947.
22. Rodriguez v. Succession of McFettridge, 156 La. 111, 100 So. 68 (1924).
23. Cormier v. Meyers, 233 La. 259, 65 So.2d 345 (1953).
24. Succession of Franz, Docket No. 42875, La. S. Ct., Feb. 25, 1957.
25. In re Chylak's Estate, 55 Lack. Jur. (Pa.) 129.
26. Brief for Plaintiff-Appellee, p. 3, Succession of Lafferanderie, 228 La. 871, 84 So.2d 422 (1955).
27. Wright v. Lewis, 5 Rich. Law 212, 39 S.C. Law. 85, 55 Am. Dec. 714, L.R.A. (N.S.) 94 (1851).
28. Succession of Mithoff, 168 La. 624, 122 So. 886 (1929).
29. In re Cox' Will, 139 Me. 261, 29 A.2d 281, (1943).
30. Schram, C. M. News, 79: 90, July 1901.
31. Succession of Moody, 227 La. 609, 80 So.2d 93 (1955).
32. Gairdner, W., and Elder, W. Brit. M. J., 2: 581, Sept. 1898.
33. Fisher, E. Med. Rev. of Rev., 12: 138, Feb. 1906.
34. Bramwell, B. Clin. Stud. Edinburgh, 1: 193, Jan. 1902.
35. See note, L.R.A., (1915A) 458.

36. *Appelhans v. Jurgenson*, 336 Ill. 427, 168 N.E. 327, 67 A.L.R. 851 (1929).
37. *In re Swan's Estate*, 4 Utah 2d 277, 293 P.2d 682, 277 (1956).
38. *Notes*, 27 L.R.A. (N.S.) 56; L.R.A. (1915A) 458.
39. *Prentiss v. Bates*, 93 Mich. 234, 53 N.W. 153, 17 L.R.A. 494 (1892).
40. *Bounds v. Johnson*, 102 S.W. 972 Mo. (1917).
41. *In re Seidman's Will*, 79 Okla. 191, 192 Pac. 203, 16 A.L.R. 450, 16 L.R.A. 457 (1920).
42. *In re Goltz's Will*, 190 Wis. 524, 209 N.W. 704 (1926).
43. *In re Murray's Estate*, 173 Ore. 209, 144 P.2d 1016 (1944).
44. *Lee's Heirs v. Lee's Ex'r*, 4 McCord 183, 15 S.C. Law 69, 17 Am. Dec. 722 (1827).
45. *In re Miller's Estate*, 10 Wash.2d 258, 116 P.2d 526 (1941).
46. *Owen v. Crumbaugh*, 228 Ill. 380, 81 N.E. 1044 (1907).
47. *Middleditch v. Williams*, 45 N.J. Eq. 726, 17 Atl. 826 (1889).
48. *In re McDowell's Will*, 140 Atl. 281, aff'd, 103 N.J. Eq. 346, 143 Atl. 325 (1928).
49. *Wait v. Westfall*, 161 Ind. 648, 68 N.E. 271 (1903).
50. *In re Estate of Glesenkemp*, 378 Pa. 635, 107 A.2d 731 (1954).
51. *Speedling v. County of Worth*, 68 Ia. 152, 26 N.W. 50 (1885).
52. *Davidson, H. Forensic Psychiatry and the Law*. New York: W. W. Norton & Company, 1952.

USE OF MILTOWN (MEPROBAMATE) WITH PSYCHOTIC PATIENTS

VERONICA M. PENNINGTON, M.D.¹

The present study of the tranquilizing drug Miltown² (meprobamate) was undertaken as part of a larger investigation of the value of 6 ataractic drugs in hospitalized psychotic patients (1, 2). Altogether, 1,250 patients received one or more ataraxics for periods of up to 18 months. Of this total, 300 were treated with Miltown.

SCOPE AND METHOD

Patients were chosen at random; some had improved or had been brought to remission on other ataraxics and had had a psychotic relapse on placebo; some did not do well on the tranquilizing drug they were taking and were changed to Miltown. Most of these patients had had electric or insulin shock therapy. Four had been lobotomized. The past histories of these patients and their response to other therapies were well known to us so that the comparative results could readily be determined. Many of the best prospects for betterment had already been returned to their homes because of the beneficial action of other tranquilizers, leaving those patients whose prognosis was poor to be treated with Miltown. They ranged in age from 15 to 84 years, and had been hospitalized from 1 week to 55 years. Most of this group had been psychotic for over 3 years, many of them for 20 years; the average duration of psychosis was 16 years.

Our beginning dose was two 400 mg. tablets twice a day. This was increased until a favorable response was noted. Most of the patients were seen by me daily and the dosage of Miltown adjusted to their individual needs until a stabilizing dose could be determined. The average required dose was found to be eight 400 mg. tablets during a 24-hour period, although a few patients required as much as 24 tablets.

Blood counts were done on all patients

taking this medication and showed no abnormalities. Blood pressure readings and physical and psychiatric evaluations were made prior to, during, and after treatment. Dosage, weight and sleep charts were kept, as well as charts of physical and emotional changes. Semi-monthly recordings of these changes, as seen by the patient himself, the psychiatric aides, his relatives and myself were also kept.

For control, 100 patients were given placebo for 2 months, followed by Miltown, in addition to 200 placed directly on the active medication. In another trial, involving 196 patients, 6 ataraxics including Miltown were investigated in a double-blind study. The active medications and placebo were coded and rotated in 4-week courses, the druggist being the only person who knew the code. This made each patient his own control as well as a control for all in the group.

One-third of the patients received Rorschach and Bender-Gestalt tests to determine the degree of their normality or psychopathy after treatment as compared with those qualities before treatment.

RESULTS

Results of the study are summarized in Table 1. Of the 300 patients treated with Miltown, 3% showed complete remission, 35% were greatly improved, 46% showed some improvement, and in 16% no significant change was observed.

Best results were achieved in a group of 30 paranoid schizophrenics, all of whom experienced some benefit from the drug, 60% showing great improvement, including 10% who experienced complete remission. Cata-tonic and hebephrenic types and patients suffering from symptoms of organic brain disease were less often helped, important improvement occurring in about one-third of these cases. Other categories were not studied in sufficient numbers to warrant generalized judgment as to results. Physical gains due to better sleep habits and relaxa-

¹ Address: Mississippi State Hospital, Whitfield, Miss.

² The Miltown used in this research and a grant for psychological testing were supplied by Wallace Laboratories, New Brunswick, N. J.

TABLE 1

RESULTS OF MILTOWN TREATMENT IN 300 HOSPITALIZED PSYCHIATRIC PATIENTS

Diagnosis	No. of patients	No. improved with Miltown				Percent greatly improved (inc. remission)
		Complete remission	Greatly improved	Some improvement	No change	
Schizophrenia	210	6	69	98	37	37
—catatonic	94	3	30	55	6	35
—hebephrenic	86	—	24	31	31	28
—paranoid	30	3	15	12	—	60
Manic-depressive psychosis	4	—	—	—	—	—
—manic	3	2	1	—	—	—
—depressive	1	—	1	—	—	—
Involuntal psychosis	3	—	3	—	—	—
Senile psychosis	6	—	—	3	3	—
Idiopathic epilepsy	16	—	6	10	—	—
Organic disease	46	—	16	21	9	35
Arteriosclerotic psychosis	12	—	6	6	—	—
Psychosis with mental deficiency ..	12	—	3	9	—	—
Psychosis with epidemic encephalitis.	3	—	—	—	3	—
Brain tumor	1	—	1	—	—	—
Meningoencephalitis syphilitica	12	—	3	6	3	—
Huntington's chorea	3	—	3	—	—	—
Paralysis agitans	3	—	—	—	3	—
Psychophysiological autonomic and visceral disorder	3	—	3	—	—	—
Psychoneurotic disorder (anxiety) ...	6	1	5	—	—	—
Personality trait disturbance	6	—	—	6	—	—
Total	300	9	104	138	49	38

tion were made by about 50% of the patients.

In the double-blind study in which patients received active medication and placebo in 4-week courses, Miltown showed an improvement rate of 60%. When placebo was administered as the first medication, improvement at the end of the month was less than 1%. In later courses, when placebo was given following active medication, improvement rose to 68%. These later courses of placebo must therefore be discounted as reflecting in reality the delayed action or continuing effects of the previously taken drugs. When placebo was given to 100 patients for 2 months, in the present study, prior to the initiation of Miltown treatment, no sustained improvement was observed, the small gains temporarily made being lost over the longer period of sustained placebo administration.

Of the 100 patients who received psychological tests, 8 had normal protocols following Miltown treatment and were judged to be in remission. Nineteen were in partial remission, showing an intellectual control of their symptoms and a capacity for empathetic relationship which made them appear normal; some of these showed psychotic residuals. Fifty-two patients were rated as

improved, including 48 who had not been testable prior to medication; these latter all continued to show a psychotic record. Twenty-one patients remained untestable. Paranoid ideation showed improvement in a number of cases. Several patients who had been actively hallucinated and delusional prior to taking Miltown showed no schizophrenic fantasy in remission. Homosexual trends were not affected.

Thirty-three patients were returned to their homes following Miltown treatment, and 27 were ready to leave, awaiting relatives to take them. Five patients hospitalized over 10 years are doing well at home on Miltown. All received prescriptions for maintenance doses for use after their release. Five of these patients returned to the hospital following recurrence of symptoms, only one having continued to take the medication at home as prescribed.

SIDE EFFECTS

Hypotension on large dosage occurred in 3 cases. The first patient, a schizophrenic catatonic receiving ten 400 mg. tablets twice a day, because of markedly assaultive be-

havior and banging his head against the wall, was considered by the psychiatric aides to be in shock. When seen by me, he was sleeping soundly but could be aroused. His blood pressure was 90/60, pulse 58, regular in rate and rhythm. Respirations were 12 per minute. He was given 2 cups of coffee and was walked about the ward by 2 psychiatric aides. He continued to be up and about the remainder of the day.

The second case, on a beginning dose of ten 400 mg. tablets twice daily, was transferred to the hospital ward by the officers of the day when she could not be aroused. Her color was good, extremities warm, respiration 12 per minute, pulse 50, blood pressure 70/50. When her name was called, she opened her eyes and turned on her side. Soon her blood pressure was 100/60; normally it was 130/70. She was given passive exercise and caffeine sodiobenzoate, which reduced the period of beneficial sleep produced by her medication.

A third patient accumulated sixty-two 400 mg. tablets of Miltown over a period of weeks by hoarding the 8 tablets given to her daily and picking up tablets discarded by other patients. She became somnolent in the afternoon of September 29 and since she often had periods of catatonic inactivity, the aide administered her usual dose of four 400 mg. tablets of Miltown, bringing the total intake of this medication up to sixty-six 400 mg. tablets. At 3:00 P.M., I was called because she could not be aroused. Her color was good, she flinched at the touch of ice to the abdomen, blood pressure was 120/70, pulse was regular in rate and rhythm. Her blood pressure dropped to 100/70, pulse was 88. She was given 2 ampules of coramine and caffeine sodiobenzoate. A lumbar puncture, blood sugar and coagulation time were done since the cause of her comatose condition was not yet certain. The following day her blood pressure went up to 120/70. Pulse rate was 120. She moved slightly to painful stimuli and yawned occasionally. She began to move her arms and legs late on the second day. Still later that day she sat up and on the third day after admission to the hospital, she ate well and admitted taking the excessive dose of Miltown.

One patient on a regimen of ten 400 mg.

tablets of Miltown twice a day had one *grand mal* seizure. Schizophrenics frequently have a convulsion and I have always felt that shock therapy predisposes them to seizures. Since this patient was a schizophrenic and had had innumerable shock treatments, the cause of the convulsion seems to me uncertain.

Allergic reactions to this medication have been reported (3) but none were present in this series. No nasal stuffiness, vomiting, diarrhea, muscle aches, pyalism, or skin rashes occurred.

DISCUSSION

Previous investigations of Miltown have reported on the value of the drug as a tranquilizer in neurotic conditions, particularly in anxiety and tension states (4, 5, 6). The present study shows that Miltown is also effective for gross symptomatology and for marked deviations from normal emotionality, as in the psychoses. Disturbed, self-destructive, assaultive, enuritic patients and those showing the noisy psychomotor hyperactivity of catatonic excitement, manic stimulation, and epileptic furor become tractable, quiet and capable of co-operation. Aggressiveness, irritability, hostility, and belligerence are relieved. Even the most pugnacious and noisy patient can be maintained in a quiet, calm condition on the dosage best suited to that individual. We have been able to discontinue hydrotherapy and all forms of shock treatment with patients receiving Miltown medication.

Improvement is more easily attained in hyperkinetic than in lethargic individuals. The duration of the psychosis is also important in the prognosis, but this appears to be less significant than whether the patient is overactive or withdrawn.

An unexpected result of Miltown treatment not mentioned in the literature is that of staunching the odor of perspiration. Four of our patients have for several years been known to have a strong acrid perspiration odor which no amount of bathing changed. Under Miltown treatment bromhidrosis subsided completely. One can only speculate as to the reason, but a possibility may be that the decreased emotional turbulence brought about by the drug resulted in re-

duced activity of the sudoriferous glands, whose secretions contain odorous substances, and which are principally responsive to emotional stimulation(8).

The action of Miltown is gentle and free of side effects. In contrast to chlorpromazine and reserpine, Miltown does not act upon the autonomic nervous system(9). Unlike all other ataraxics, it has a relaxing effect on skeletal muscles in addition to its tranquilizing effect on the central nervous system(10, 11).

Miltown calms and quiets without clouding consciousness, and enables the patient to secure restful sleep without hangover. Except in overdosage, the patient can be aroused at all times to attend to his personal needs. His environment does not disturb him. Logical thinking returns and in many cases, when environmental tensions lessen, delusions and hallucinations are obviated with the support afforded his ego by this medication.

While striking results were not obtainable in all cases, Miltown in the dosages used, proved at least as effective as the other ataraxics studied, despite the fact that the patients treated were the less promising cases. Because of these comparatively good results, and also because of its exceptional safety and negligible side effects, I consider that Miltown is the drug to be tried first in the treatment of emotional disturbances. In those cases where good response is not achieved, more toxic medications may be risked.

In my opinion, the beneficial results of Miltown are probably symptomatic, not etiological, just as insulin is in diabetes. It is assumed that even upon discharge continued medication will generally be necessary in psychotic patients for continued mental health.

CONCLUSIONS

Miltown (meprobamate) was studied in 300 hospitalized psychotic patients. In the dosage range from two to twenty-four 400 mg. tablets daily, the drug produced complete remission of symptoms in 3% of patients, striking improvement in 35%, some improvement in an additional 46%, and no significant change in the remaining 16%.

Physical gains resulting from better sleeping habits and relaxation were made in about half the patients. Paranoid schizophrenics appeared to derive greatest benefit from the drug.

Noisy, assaultive, eneuritic, delusional, hallucinated patients were generally relieved of these symptoms, although psychological residuals usually remained. Psychological testing showed improvement in the Rorschach and Bender-Gestalt tests with an effort, in many cases still showing psychotic traits, to reach healthy relationships with their environment. Eight patients tested normal after taking the drug. Most of the remainder showed increased ability to sublimate their abnormal psychological drives, and to get along in their milieu.

Thirty-three patients were able to be discharged from the hospital following Miltown treatment, and 27 were ready for release as soon as arrangements for family custody could be made.

Retarded, blocked, hypoactive patients were not as markedly benefited as the hyperactive, noisy type.

The safety of Miltown and its almost complete lack of side effects, except for hypotension in high dosage, makes it an ataraxic of choice. It is an important addition to the armamentarium of the neuro-psychiatrist.

BIBLIOGRAPHY

1. Pennington, V. M.: *The Use of Reserpine in 350 Neuropsychiatric Cases*. A.P.A. Regional Research Meeting, Galveston, Tex., Feb. 10, 1955.
2. Pennington, V. M.: *The Effect of Six Ataraxics in Neuropsychiatric Patients*. Am Psychosomatic Soc. Meeting, New York City, Oct. 6, 1955.
3. Selling, L. S.: *J.A.M.A.*, **157**: 1594, 1955.
4. Selling, L. S.: *J. Clin. & Exper. Psychopath. & Quart. Rev. Psychiat. & Neuro.*, **17**: 7, 1956.
5. Borrus, J. C.: *J.A.M.A.*, **157**: 1596, 1955.
6. Lemere, F.: *Northwest Med.*, **54**: 1008, 1955.
7. Bliss, E., Migeon, C. J., Branch, C. H., and Samuel, L. F.: *Am. J. Psychiat.*, **112**: 378, 1955.
8. R. C. Mann, S.: *Pharmacology and Biochemistry of the Sleep Chemicals*. Univ. of Chicago Press, 1954.
9. Penning, F. M.: *Internat. Rev. of Med. & Gen. Pract. Clin.*, **160**: 184, 1956.
10. Penning, F. M.: *J. Pharmacol. & Exper. Therap.*, **110**: 413, 1954.
11. Hendley, C. D., Lyman, T. F., and Berger, F. M.: *Proc. Soc. Exper. Biol. & Med.* **87**: 608, 1955.

CLINICAL NOTES

THE EFFECT OF A SPECIAL DIET ON HOSPITALIZED SCHIZOPHRENIC PATIENTS¹

SAMUEL BOGOCH, M.D., PH.D.²

Twenty-two young hospitalized schizophrenic patients (17-38 yrs.; 12 female, 10 male), most of whom had demonstrated ability to recover from previous acute psychotic episodes, were given a diet essentially free of aromatic amino acids for 3 weeks.³ In the following 3 week period, one-half of the patients remained on the deficient diet, while the rest received supplements of phenylalanine (5g. per 100g. protein) and tryptophane (1.8g. per 100g. protein). The assignment of patients for the control diet of the second period was made at random by the dietician, in advance of the first dietary period. It was impossible to distinguish the deficient diet from the control diet in terms of appearance or palatability. Clinical evaluation was performed independently by the ward staff and the author. Neither knew which patients received the deficient diet and which received the supplemented diet, nor did the patients know that all of the diets were not identical. Caloric intake was between 2400 and 2700 calories per day. The unavoidable protein ingested on the test diet did not exceed 2.5gm. daily. "Clnsivol" multivitamin capsules were given once daily to insure adequate vitamin intake. No other food was available to the patients.

Of the 22 patients on the deficient diet,

13 (8 males, 5 females) became clinically worse, and 9 showed no significant change.

In the second 3 week period, of the 13 patients whose condition had deteriorated, one had to be removed from the project to be given ECT, 8 remained on the deficient diet, while 4 fell into the control group receiving an adequate intake of aromatic amino acids. Of the 8 who remained on the diet, 5 remained worse, while 3 returned to their pre-diet level (still unimproved). Of the 4 who subsequently received an adequate amino acid intake, all showed improvement. One was better than her pre-diet level for a week, then slipped back, while the other 3 gradually improved to their pre-diet level of adjustment only.

Of the 9 patients (2 males, 7 females) who showed no significant change in the first 3 weeks on the deficient diet, 5 fell into the group remaining on the deficient diet, while 4 received the adequate control diet. Of the 4 who received an adequate intake, one improved to a slightly better than pre-diet level, while 3 showed no significant change. Of the 5 who remained on the diet, no significant change occurred.

It is clear from the results presented that the diet is not to be considered a therapeutic agent. In fact there is evidence that it is psychotoxic. While improvements attributable to placebo effects or to spontaneous recovery would be expected to take place in about one-third of the patients, in the present experiment, none showed any significant improvement. Some of the factors, both dynamic and metabolic, which may be responsible for the psychotoxic effects observed, form the subject of further experiments, and are discussed in a detailed report of this study which will appear elsewhere.

¹ This study was conducted under the auspices of Dr. W. C. Gibson and the department of neurological research, University of British Columbia Medical School, Vancouver. The author is grateful to Drs. A. M. Gurr, A. Davidson and F. McNair for making available the clinical facilities of the Crease Clinic of Psychological Medicine and Insondale Mental Hospital, and to the members of the nursing and dietary staffs.

² Massachusetts Mental Health Center (Boston Psychopathic Hospital) and department of psychiatry, Harvard Medical School.

³ Allen & Hanbury Co., Ltd., Casam Hydrolysate Bantor Road, Toronto, Ontario

MEPAZINE (PACATAL)¹—FURTHER REPORT

NORBERT BRUCKMAN, M.D., MURRAY KITCHENER, M.D., JOHN C. SAUNDERS, M.D.,
AND NATHAN S. KLINE, M.D.²

In July 1955 we (6) reported the results of a rapid evaluation of mepazine (Pacatal). The material had been supplied in bulk to an American pharmaceutical house from the German manufacturers and subsequently we had reason to believe that something happened somewhere along the line to introduce a contaminant. In a letter (5) to the editor of this journal in 1956 we stated that we were then re-evaluating the preparation. We did so in six different groups of chronic psychotics. The first group comprised 14 males all of whom had proved failures on electroshock, insulin, reserpine, chlorpromazine or some combination of these. This time we used mepazine manufactured in the United States (Warner-Chilcott's Pacatal). The patients were given 150 mgs. daily which was increased by 25 mgs. every 5 days until 300 mgs. was reached. This was continued for 2 months and then increased to 400 mgs. daily and continued for another 2 months. Despite the fact that these patients had failed on all previous therapies and were among the most chronic disturbed schizophrenics in the hospital, 6 of the 14 showed some improvement and it was specifically noted in several of the case records that in addition to becoming quieter and more cooperative depression was relieved. Improvement, however, was not sufficient for any of the patients to be considered for discharge. In contrast to our previous results, no side effects were noted in this group except transient drowsiness in one patient. We then expanded the study and tried 12 additional chronic psychotic males on a combination of 4 mgs. of reserpine and 200 mgs. of mepazine. Neither improvement nor side effects was noted in any patient in this group. On the combination of mepazine and chlorpromazine in another 12 male patients of the same extremely chronic therapy-resistant type with doses of 200 mgs. of mepazine and 400 mgs. of chlorpromazine 5

patients who had shown slight improvement on a combination of reserpine and chlorpromazine maintained their improvement and another 4 who were considered only slightly improved from the reserpine-chlorpromazine combination were now judged moderately improved. When these patients were subsequently maintained on chlorpromazine alone 1 of them relapsed to his previous condition and it was necessary to again add reserpine to reverse the picture. In this group also no side effects were noted.

At the same time 40 female patients of the same type were started on mepazine alone or in combination. Of 20 on mepazine alone, 1 was moderately improved, 6 slightly improved, and 13 unimproved. Of those on mepazine and chlorpromazine, 2 were moderately improved, 5 slightly improved and 3 unimproved. Of those on mepazine and reserpine, 1 was moderately improved, 5 slightly improved and 4 unimproved. There were no side effects in the mepazine-chlorpromazine group but 1 patient on mepazine alone complained of blurred vision and subsequently developed marked leucopenia which responded promptly to withdrawal of medication. Two of the patients on the mepazine-reserpine combination developed leucopenias and 1 of these had reactivation of an old osteomyelitis. The leucopenia progressed to agranulocytosis and subsequently the patient died. The other patient recovered uneventfully as did a third who developed a milder leucopenia.

There is little question that mepazine is an active ataractic agent and that at times it will bring about improvement when reserpine, chlorpromazine or the combination of these 2 drugs has proved ineffectual. We would recommend, as have other authors, that dosage be increased gradually to avoid side effects. The higher incidence of side reactions in the females on phenothiazine derivatives has also been commented on fairly frequently in the literature. Whether the combination of mepazine and chlorpromazine acted, in the females, to cancel out side ef-

¹ Appreciation is expressed to Warner-Chilcott Laboratories, Morris Plains, N. J., for the supply of Pacatal.

² Address: Rockland State Hospital, Orangeburg, N. Y.

fects or whether this was a statistical accident cannot be determined on the basis of the relatively small number of cases. Certainly this mepazine-chlorpromazine combination was the most effective one in both the males and females.

The expectation of finding a single ataractic agent that would be effective for all types of patients has not and is not likely to be realized. Rather we are having made available to us a sizeable number of pharmaceuticals which can be used selectively to meet the needs of the individual patient. On the basis of our experience with mepazine, not only in the hospital, but in private practice, and through information provided both in the literature and in conversation with numerous practicing psychiatrists, certain tentative conclusions can be drawn as to its use:

1. Of the ataractic agents presently available mepazine apparently induces the least depression and may even serve to relieve mild depressions when they pre-exist.

2. The incidence of blood dyscrasias in the females suggests that mepazine (along with the other phenothiazine derivatives) be used with considerable caution and under close medical supervision for the first month and a half. Patients should be told to report immediately any evidence of temperature elevation and "scratchy" or sore throat since these clinical symptoms usually appear early enough to prevent a serious blood dyscrasia by withdrawing medication. This limitation is set since no record of a blood dyscrasia occurring beyond the 45th day has been reported.

3. As noted first by Hiob and Hippius(3) and later by Bowes(1) (as well as in our own series) mepazine and chlorpromazine appeared to act synergistically.

4. The sympatholytic action of chlorpromazine and the parasympatholytic action of mepazine may also act to eliminate some of the side effects of each as has been reported by Kleinsorge(4) and by Braun(2) and confirmed in our own series.

5. It has been shown that whereas chlorpromazine blocks epinephrine and serotonin in various biological systems, mepazine does not. This may well be related to the absence of depression or the antidepressant activity of mepazine.

6. Mepazine, although potent, is somewhat milder in its effect than some of the other pharmaceuticals in this field. For this reason it particularly suggests itself for use in the office patient with agitation and depression or in those in whom the other pharmaceuticals have produced feelings of emptiness, depression or psychic discomfort.

BIBLIOGRAPHY

1. Bowes, H. A. *Am. J. Psychiat.*, 113:530, Dec. 1956.
2. Braun, M. *Am. J. Psychiat.*, 113:838, Mar. 1957.
3. Hiob, J., and Hippius, H. *Med. Klin.*, 50:1746, 1945.
4. Kleinsorge, H. *Arztl. Wschr.*, 9:271, 1954.
5. Kline, N. S. *Am. J. Psychiat.*, 113, No. 6, Dec. 1956.
6. Kline, N. S., and Jacob, G. M. *Am. J. Psychiat.*, 113, No. 1, July 1955.

SERUM LIPOPROTEIN CONCENTRATIONS IN A SCHIZOPHRENIC POPULATION¹

EDWARD H. STRISOWER, OLIVER DELALLA, JOHN W. GOFMAN, AND
BEVERLY STRISOWER

Whereas several hundred reports on serum lipids in schizophrenic patients have appeared

¹ This work was supported by a grant from the Albert and Mary Lasker Foundation, Inc. We wish to acknowledge the cooperation of the ward personnel at Stockton State Hospital and Napa State Hospital, California, and the assistance of Mrs. Bette Green, Maud Avery, and the technical work-

since 1912(1, 2) no information on serum lipoprotein concentrations is available to date. This report provides information on the distribution of both low and high density serum

esters at the Donner Laboratory in making this study.

² From the Division of Medical Physics of the Donner Laboratory of Medical Physics Radiation Laboratory, University of California, Berkeley, Cal.

TABLE 1

COMPARISON OF LOW DENSITY SERUM LIPOPROTEIN CONCENTRATIONS IN A NORMAL AND A SCHIZOPHRENIC MALE POPULATION

	n	Age	Serum Lipoprotein Concentrations*				MG/100ml of serum	
			mg/100ml of serum				Cholest*	n** Cholest
Schizophrenic	17	20-29	298 ± 62	39 ± 48	81 ± 31	39 ± 38	207 ± 30	168
Normal controls	335	20-29	326 ± 88	40 ± 21	75 ± 42	36 ± 39	209 ± 43	
Schizophrenic	20	30-39	316 ± 62	30 ± 17	76 ± 30	33 ± 29	200 ± 29	231
Normal controls	499	30-39	354 ± 84	51 ± 24	92 ± 55	51 ± 59	222 ± 44	
Schizophrenic	37	40-49	370 ± 81	45 ± 25	80 ± 37	46 ± 47	238 ± 43	84
Normal controls	249	40-49	382 ± 91	58 ± 23	108 ± 68	67 ± 97	239 ± 42	
Schizophrenic	14	50-69	402 ± 103	48 ± 19	86 ± 42	37 ± 30		
Normal controls	86	50-69	393 ± 76	58 ± 24	108 ± 54	61 ± 72		

* Mean values and standard deviation of the distribution.

** The normal group of males on which the cholesterol data are based is smaller than the entire normal control group for the serum lipoprotein data.

S_r⁰ refers to Svedberg units of flotation (10⁻¹³ cm/sec/dync/gram) including a correction to account for the self slowing of lipoproteins as their concentrations increase during the flotation process.

lipoproteins in a male schizophrenic population.

Serum lipoprotein and cholesterol determinations were performed by methods³ previously described(3, 4) on 88 male chronic schizophrenic hospitalized patients. Selection of these patients was based on the absence of other acute or chronic disease as judged by clinical criteria and routine laboratory tests; also, no patients who had received chemotherapy or electroshock treatments for several months preceding the blood sampling were included in this study. All blood samples were drawn in the morning 2-4 hours following breakfast.

Results are summarized in Tables 1 and 2

TABLE 2

COMPARISON OF HIGH DENSITY SERUM LIPOPROTEIN CONCENTRATIONS IN A NORMAL AND A SCHIZOPHRENIC MALE POPULATION

	n	Age	Serum Lipoprotein Concentrations* mg/100ml of serum		
			HDL ₁ ^{2**}	HDL ₂ ^{3**}	HDL ₃ ^{3**}
Schizophrenic ...	17	20-29	22 ± 5	38 ± 14	203 ± 15
Normal controls ..	335	20-29	23 ± 8	38 ± 30	218 ± 39
Schizophrenic ...	20	30-39	25 ± 7	57 ± 39	195 ± 37
Normal controls ..	499	30-39	24 ± 17	35 ± 27	222 ± 41
Schizophrenic ...	37	40-49	28 ± 17	58 ± 34	208 ± 45
Normal controls ..	249	40-49	26 ± 18	37 ± 29	228 ± 51
Schizophrenic ...	14	50-69	26 ± 60	39 ± 31	198 ± 46
Normal controls ..	86	50-69	28 ± 27	40 ± 33	219 ± 50

* Mean values and standard deviation of the distribution.

** HDL₁, HDL₂, and HDL₃, refers to high density serum lipoproteins defined by densities of 1.05, 1.075, and 1.145 gms/ml respectively.

³ We are indebted to Dr. Oliver deLalla for the development of the method and for the analyses of the high density serum lipoproteins.

for the low density and high density serum lipoproteins respectively. The tables provide mean values and standard deviations of the distribution for each serum lipoprotein class for a given age group for the schizophrenic population as well as directly comparable data for a normal population.

The schizophrenic population has, in general, low density serum lipoprotein and serum cholesterol concentrations similar to the matched normal population. The small differences seen in the direction of lower serum lipoprotein levels, most marked in the 30-39 year age group, are statistically not significant. Data on the three high density serum lipoprotein classes constituting the entire high density lipoprotein spectrum are presented in Table 2. No significant differences between the normal and schizophrenic populations exist, except for the following two instances. The HDL₂ lipoproteins are higher in the schizophrenic population in the 30-39 and 40-49 year age groups, significant at the 5 and 1 per cent levels respectively, and HDL₃ serum lipoproteins tend to be lower in the schizophrenic population at all age ranges studied; however this latter difference could be proven significant below the 5 per cent level only in the 30-39 year group. The biological and clinical significance of these observations is under further investigation at present.

The smaller standard deviations of the distribution obtained in most of our measurements on schizophrenic patients compared

with those of the normal population do not support the concept postulating a greater variability of serum lipid levels in schizophrenia (5-7). Furthermore, because of the much larger group of normal males on which the normal population statistics are based, lower rather than equal or higher standard deviations would be expected in the normal compared with the schizophrenic population.

Perhaps the most interesting and useful application of a knowledge of low density serum lipoprotein levels in a schizophrenic population relates to the question of cerebral atherosclerosis as an etiologic factor in schizophrenia. The highly significant correlation between the degree of coronary atherosclerosis and that of the major supply arteries of the brain, recently discovered (8), implies an important biochemical relationship between low density serum lipoprotein concentrations and cerebral atherosclerosis, similar to the well established association of coronary atherosclerosis with elevated low density serum lipoprotein levels (9-11). The lack of elevation observed in all classes of the low density serum lipoprotein spectrum and in all age groups of a schizophrenic population provides excellent biochemical evidence for

the view that cerebral atherosclerosis is not a significant etiologic factor in the schizophrenic reaction.

BIBLIOGRAPHY

1. McFarland, R. A., and Goldstein, H. *Am. J. Psychiat.*, 95: 509, 1938.
2. Eaton, M. T., Jr., and Muntz, H. M. *Am. J. Psychiat.*, 104: 315, 1947.
3. deLalla, O., and Gofman, J. W. In Glick, D.: *Methods of Biochemical Analysis* New York, 1954. Vol. 1.
4. Colman, D. M., and McPhee, A. *Amer. J. Clin. Path.*, 26: 181, 1956.
5. Jellinek, E. M. *Endocrin.*, 25: 97, 1939.
6. Larue, G. H., Painchaud, C. A., and Nadeau, G. *Canad. M. A. J.*, 62: 581, 1950.
7. Nadeau, G., and Larue, G. H. *Canad. M. A. J.*, 66: 320, 1952.
8. Young, W., Gofman, J. W., Malamud, N., Simon, A., and Waters, E. S. A. *Geriatrics*, 11: 413, 1956.
9. Gofman, J. W., Glazier, F., Tamplin, A., Strisower, B., and deLalla, O. *Physiol. Rev.*, 34: 589, 1954.
10. Glazier, F., Tamplin, A., Strisower, B., deLalla, O., Gofman, J. W., Dawber, T. R., and Phillips, E. J. *Geront.*, 9: 395, 1954.
11. Tamplin, A., Strisower, B., deLalla, O., Gofman, J. W., and Glazier, F. J. *Geront.*, 9: 404, 1954.

PROCEEDINGS OF THE AMERICAN PSYCHIATRIC ASSOCIATION

THE ONE HUNDRED AND THIRTEENTH ANNUAL MEETING, CHICAGO, ILLINOIS, 1957

The 113th annual meeting was held in Chicago, Ill. at the Morrison Hotel, May 13-17, 1957. The opening meeting, May 13, was called to order by the President, Dr. Francis J. Braceland, at 9:15 a.m. After the invocation by Rev. William J. Devlin, S. J., M. D. of Chicago, who is a member of the APA, welcoming remarks were presented by Dr. Roscoe Miller, M.D., Dean of the Northwestern University School of Medicine.

Dr. Braceland introduced President-Elect Dr. Harry C. Solomon, and then called for the reports to the membership. The Medical Director, Dr. Daniel Blain, read his 10th annual report reviewing the Central Office operations which have continued to expand during the past year. Dr. Matthew Ross, retiring Speaker of the Assembly of District Branches, related the history and development of the District Branch program. The Chairman of the Committee on Arrangements, Dr. Hugh T. Carmichael, called attention to the Convocation ceremonies scheduled for the following morning and also reported the diversionary program which had been arranged for members and guests in cooperation with the Ladies Committee under the Chairmanship of Mrs. L. Louis Steinberg. Dr. Titus Harris, Chairman of the Program Committee, pointed out new features of this annual meeting, including the Adolf Meyer Research Lecture and the Fellowship Lecture, formerly the Academic Lecture, to be presented in conjunction with the Convocation.

Dr. William Malamud, Secretary, reported the membership statistics for the past year. As of March 31, 1957 the total membership was 9,247. Dr. Jack R. Ewalt, Treasurer, presented his report which is included in another section of these Proceedings. He also informed the membership that in view of the limited financial reserve of the Association and its increasing expenses, the Council had

found it necessary to recommend that the dues for Fellows and Members, be raised effective April 1, 1958.

Dr. Theodore Lidz, Chairman of the Hofheimer Prize Board, presented this Prize for research in psychiatry to Christoph M. Heinicke, Ph.D., of Portland, Oregon for his work at the Tavistock Clinic in London, England. The prize-winning study dealt with the effects of separating two-year olds from their parents. Honorable Mention was given to Dr. Charles Shagass of Montreal, Canada. Dr. Frank J. Curran, Chairman of the Board of the Isaac Ray Award, presented the Award to Dr. Manfred S. Guttmacher, psychiatrist and Chief Medical Officer of the Supreme Bench of Baltimore, Maryland. The Isaac Ray Award is presented for outstanding contributions to better understanding between psychiatry and law. Dr. Guttmacher will deliver his series of lectures under the sponsorship of the Schools of Law and Medicine at the University of Minnesota in the academic year 1957-1958, and the lectures will be published by Farrar, Straus and Cudahy. The winners of the Mental Hospital Achievement Awards were announced by Dr. Blain as the Saskatchewan Hospital, Weyburn, Canada, and the Receiving Hospital, Detroit, Michigan. Honorable Mention Awards were won by the Northern State Hospital, Sedro-Woolley, Washington, and the Madison State Hospital, Indiana. These Awards will be presented at the Mental Hospital Institute in the fall.

Dr. Braceland introduced the recommendations of the Membership Committee, as approved by the Council, regarding applications for election to membership and for changes of membership status. On motion, duly seconded, the recommendations were approved by the membership. There were 657 new members elected bringing the total to 9,904.

Dr. Braceland was introduced by Dr. Solomon and gave his Presidential Address entitled "Psychiatry and the Science of Men." Dr. Solomon responded, and then the audience was asked to stand in memorial to the members of the Association who had died during the year. The benediction was pronounced by the Rev. Donald Cox, Chaplain of Kankakee (Illinois) State Hospital.

On Monday evening, May 13, the 1st annual Adolf Meyer Research Lecture was presented by Stig Akerfeldt, Ph.D., of the Nobel Institute in Stockholm, Sweden, on the subject "Serological Reaction of Psychiatric Patients to *n,n*,dimethyl phenylamine." Dr. Nathan S. Kline, Chairman of the Research Committee, moderated a discussion panel following the address. This Lecture is planned as a means of bringing an outstanding foreign researcher to each annual meeting to present a scientific paper.

The next business session was called to order by the President on Tuesday morning, May 14, at 9:00. Dr. Robert S. Garber, a member of the Board of Tellers for Election of Officers, presented his report. A total of 4,398 ballots were cast, with 28 being declared invalid. The officers elected for 1957-1958 are as follows: Dr. Francis J. Gerty, President-Elect; Dr. William Malamud, Secretary; Dr. Jack R. Ewalt, Treasurer; Incoming Councillors—Dr. C. H. Hardin Branch, Dr. Addison M. Duval, and Dr. Jacques S. Gottlieb. Regarding the proposed amendment to the Constitution and By-Laws to establish 2 new elective offices (Vice Presidents), both portions were approved by the following figures: Amendment to Constitution—3,755, yes; 146, no; 48 invalid; Amendment to By-Laws—3,752, yes; 146, no; and 48 invalid. The Parliamentarian, Dr. Henry Davidson, then read 2 new proposals for amending the Constitution and By-Laws which had been approved by the Council. The first dealt with the adjudication of ethical grievances, and the second with the announcement of APA election results in the JOURNAL. These proposals will be published in the JOURNAL and will appear on the next mail ballot for consideration by the membership.

Reports were presented by the Coordinating Committee Chairmen who reviewed the

activities and plans for their respective Standing Committees: On Technical Aspects of Psychiatry, Dr. Frank J. Curran; On Professional Standards, Dr. Wilfred Bloomberg; and On Community Aspects of Psychiatry, Dr. William C. Menninger. This concluded the business session, and there was a short recess before the Convocation.

Dr. Braceland presided at the Convocation for the newly elected Fellows, which got underway at 10:00 a.m. in the Terrace Casino, and Dr. Hugh T. Carmichael served as Grand Marshall. The program began with a Processional March by the Convocation participants accompanied by an electric organ. The Life Fellows were seated to the left of the rostrum and the newly elected Fellows to the right. The invocation was given by Dr. Edgar Siskin, North Shore Congregation Israel, Glencoe, Ill. The Convocation Ceremony was very impressive and included a reading of the objectives of the APA and of Fellowship in the Association, and the official welcome to Fellowship by the President. Dr. Solomon introduced the Fellowship Lecturer, Dr. Gregory Zilboorg, who spoke on "Eugen Bleuler and Present Day Psychiatry." Dr. E. Eduardo Krapf of Geneva, Switzerland, gave the responses. The Recessional March followed the benediction by the Rev. Edward P. Dixon, Chaplain of Cook County Hospital, Chicago.

The business meeting on Wednesday morning, May 15, was called to order by the President at 9:30. The Secretary reported the actions of the Council during the past year, and these matters were duly approved by the membership upon proper motion from the floor. Separate motions were approved authorizing San Francisco, California, as the site for the 1958 annual meeting; Greater Miami Society of Psychiatry and Neurology as an Affiliate Society; and the establishment of the following District Branches: Hawaii Psychiatric Society, Illinois Psychiatric Society, Iowa District Branch, New York State Capital District Branch, South Carolina District Branch, and Wisconsin Psychiatric Association, Inc. The presentation of Certificates by the Secretary to those retiring from office was the last item of business at this meeting.

The Annual Dinner was held on Wednesday evening, May 15, and was well attended. The Past-President's Medal was presented to Dr. Francis J. Braceland by Dr. Kenneth E. Appel. A handsome Illuminated Address and an inscribed silver bowl were awarded to Mr. Austin M. Davies as a tribute to his 25 years of dedicated service to the Association as Executive Assistant and Business Manager of the JOURNAL. The latter presentation was made by Dr. Clarence B. Farrar, who has been closely associated with Mr. Davies as Editor of the JOURNAL for the past quarter of a century. A special greeting and plaque were also presented to President Braceland on behalf of the Governor of Illinois by Dr. Francis J. Gerty, incoming President-elect.

The final business session was held on Friday, May 17, at 9:00 a.m. with Dr. Braceland presiding. The Secretary reported the actions of the Council at its meeting on May 16, and these matters were approved by the membership. By separate motions the Western New York Psychiatric Society was approved as a District Branch and a revised constitution for the Connecticut District Branch also approved. Statistics regarding the enrollment at the 113th Annual Meeting were reported by the Secretary as follows: 1,924 members, 953 nonmembers, 523 guests (ladies, white cards), 137 complimentary and 199 exhibitors, for a total enrollment of 3,736. Dr. Daniel Blain presented to the Association a small wooden box, hand-carved from a single block of Australian Fiddleback Blackwood, which was a gift from Dr. Guy Springthorpe of the Australasian Association of Psychiatry (Australia and New Zealand) for use in the APA Home. Dr. Braceland then presented to Dr. Solomon the gavel signifying his assuming the Presidency. As there was no further business, the session was adjourned. The 113th Annual Meeting was officially closed at 5:00 p.m. on May 17.

RESOLUTIONS

The following Resolutions were submitted by Dr. James H. Wall, Chairman of the Committee on Resolutions:

WHEREAS, the American Psychiatric Association has conducted its 113th Annual Meeting in the City of Chicago in 1957.

1. *Now Therefore Be It Resolved*, That The American Psychiatric Association express its appreciation to Dr. Roscoe Miller, Dean of Northwestern University School of Medicine, for his cordial welcome to this association.

2. *Be It Further Resolved*, That the Association does hereby record its very real appreciation to its beloved President, Francis J. Braceland, for his able leadership by which he has guided the membership and the affairs of the Association throughout the past year and especially for his successful efforts to interpret to the membership and to the country at large, the Association's programs and policies.

3. *Be It Further Resolved*, That the Association expresses its thanks to the Officers, Members of Council, Officers of Assembly, and to the Section and Committee Chairmen and Secretaries for the very able manner in which they have pursued their duties making possible the successful and smooth functioning of the Association throughout the year and particularly during the 113th Annual Meeting.

4. *Be It Further Resolved*, That the Association acknowledges its great debt of gratitude to Dr. Daniel Blain and to Mr. Austin Davies for their very conscientious and untiring services on our behalf and to their loyal staffs whose labors ensure the perfect functioning of the Association's business.

5. *Be It Further Resolved*, That the Association again record its profound debt of gratitude to Dr. Clarence B. Farrar for his most successful work as Editor of the American Journal of Psychiatry, and for his constant efforts to maintain the high ideals of the profession of psychiatry.

6. *Be It Further Resolved*, That the Association hereby expresses its appreciation to the members of the Press, who over the year and especially at the Annual Meeting, have so well interpreted the aims, ideals and accomplishments of our profession to the American people and to the world.

7. *Be It Further Resolved*, That the Association extend its gratitude to the Committee on Arrangements and to its Chairman, Dr. Hugh T. Carmichael, and those associated with him, for the hospitality that we have experienced during our meeting in this city, the hospitality which has made our meeting pleasant and successful.

8. *Be It Further Resolved*, That the Association hereby conveys its sincere appreciation to the Ladies Committee and to its Chairman, Mrs. D. Louis Stenberg, and those associated with her, in providing entertainment for the wives of the members of the Association.

9. *Be It Further Resolved*, That the Association express its profound appreciation to the Committee on Program and especially to its Chairman, Dr. T. H. Harris who have provided a most interesting and informative program and particularly for the distinguished foreign visitors who appeared on the program.

10. *Be It Further Resolved*, That the Gratitude of the Association also be expressed to the Budget Committee and the Chairmanship of Dr. Robert H. Felix for their careful budgeting of the funds of the Association.

11. *Be It Further Resolved*, That the Association likewise expresses its appreciation to the Committee on Public Information and to its Chairman, Dr. Robert Morse, for their successful efforts to develop a better public understanding of psychiatry and the problems which it encounters and seeks to overcome.

12. *And Be It Further Resolved*, That the Association expresses its deep appreciation of the skillful, tireless efforts on the part of Mr. Robert L. Robinson, who has consistently and diplomatically worked with the Press in maintaining the high standards of public relations of the Association.

SUMMARY OF MEETINGS OF COUNCIL AND EXECUTIVE COMMITTEE

MAY 1956 TO MAY 1957

This report presents in summary form the principal actions of the Council and the Executive Committee at meetings held throughout the year. Many routine matters, such as referrals to Committees prior to definitive action, are not included. Copies of the full minutes have been forwarded to the officers of each District Branch and Affiliate Society following the various meetings to keep their members informed of the matters that were considered and the action that resulted.

Executive Committee Meetings, June 16 and September 15, 1956.—Accepted the invitation of the National Research Council to act as a joint sponsor for a Conference on Pharmacotherapy in Washington, D. C. during September 1956 and directed Drs. Jacques S. Gottlieb and Milton Greenblatt to continue to represent the APA in its relations with the N.R.C. Received a Resolution from the National Association of Private Psychiatric Hospitals regarding the operations of the Central Inspection Board and directed the Secretary to inform them that negotiations were underway with the Joint Commission on Accreditation of Hospitals and that they would be kept informed of developments. Accepted the details as recommended by the Medical Director for the previously approved extension to the Information Service. Approved a statement on tranquilizing drugs prepared jointly by the Committees on Research, Therapy, and Public Information. Recommended that in announcements of the results of APA elections, only the names of successful candidates should be indicated, without any designation of the number of votes received by the respective candidates. Directed payment of the annual APA dues to the World Federation for Mental Health. Directed that the Society of Neurology and Psychiatry of Hawaii should be referred to appropriate West Coast District Branches for assistance in setting up a Regional Research Meeting in Honolulu to supplement the APA Annual Meeting in 1958. Authorized publication and distribution in the *Mind Patch* at APA expense of a one page notice about the Second International Congress of Psychiatry. Authorized the Medical Director to employ part-time help to handle the distribution of APA publications and to charge the salary against the Publications Revolving Fund in an amount not to exceed \$1,000 per year. Directed that all matters involving representation or delegation to international meetings should be referred to the Committee on International Relations

for comment and recommendations prior to official action by the President or the Executive Committee. Authorized the House Committee to obtain estimates and plans including air conditioning for the renovation of the APA Home and to present their recommendations for consideration by the Council. Directed that an appropriate scroll should be prepared for presentation at the fall 1956 meeting of the Council and Committees to Dr. William Rush Dunton, Jr., in recognition of his years of service with the American Journal of Psychiatry. Disapproved a proposed questionnaire and reference service on sources of support for research projects as presented by the Committee on Research. Authorized the Public Information Committee to seek funds to finance a second conference similar to the Swampscott Conference. In accordance with the policy previously approved by the Council, authorized the Public Information Committee and the Medical Director, in consultation with the APA Legal Counsel, to complete negotiations for a television contract with the Sudan Company, Inc., with terms similar to those of the previous television contract. Directed that the Archives of Neurology and Psychiatry be informed that papers to which the APA has reserved publication rights are frequently released for publication in other journals upon request to the Editor of the JOURNAL by the author, and that the APA Divisional Meetings are considered to be a particularly promising source of material. Disapproved an application for change of name by the Section on Convulsive Disorders because the terms proposed for use in the new name were incompatible, and suggested that a more satisfactory designation be presented for consideration.

Council Meeting, October 27-28, 1956.—Directed that the Committee on Resolutions be discharged following the 1957 Annual Meeting and instructed the Committee on Arrangements to assume the functions of this Committee at that time. Authorized the Executive Assistant to consider all proposals in the matter of a new APA Biographical Directory and to approve a contract for its publication. Approved Atlantic City, N. J. as the site for the 1960 Annual Meeting during the second week of May. Authorized the Central Inspection Board to approach private foundations in the name of the APA seeking funds to finance inspections of private hospitals and re-inspections of hospitals previously approved or conditionally approved, after the de-

tails in the matter had been worked out in collaboration with the Medical Director's Office. Approved in principle the holding of a workshop on the use of psychoanalysts in training programs at public psychiatric hospitals with the proviso that the necessary schedule arrangements are completed by the Committee on Education in Public Hospitals in collaboration with the Medical Director's Office and funds sufficient to finance such a meeting are raised outside the APA. Recommended to the membership the establishment of the Iowa District Branch. Received the statement on desegregation prepared by the Committee on Academic Education. Approved a recommendation from the Committee on International Relations for the translation of outstanding foreign psychiatric books into English. Approved in principle a recommendation by the Public Information Committee that the practice of photographing or televising of actual psychiatric patients be optional at the discretion of the patient, his family, his physician, and the hospital. Approved recommendations by the Committee on Veterans for two letters over the President's signature to the Veterans Administration suggesting that immediate consideration be given to bringing VA professional salaries in line with parallel groups in non-Federal hospitals and suggesting that consideration be given to the "turnover rate" as well as the average daily patient load in formulating the budget for individual VA hospitals. Confirmed the President's authority to appoint official APA representatives to foreign organizations and international meetings without expense to the Association. Interpreted its previous policy regarding acceptance of APA members into District Branches to mean that if a District Branch objects to admitting an established APA member who is geographically qualified and notifies the Council of its reasons, the rejection stands unless the Council takes contrary action. Council also indicated that it was taking this matter under advisement and would endeavor to correct the problem. Approved the employment of the Thomas E. Burke and Company firm from New York City to audit the APA accounts. Directed that the membership dues for Dr. Florence Nichols should be remitted during the term of her work in India. Directed that a communication should be sent to the Speaker of the U. S. House of Representatives and to the appropriate Congressional Committee indicating the loss felt by the APA due to the death of Representative Percy Priest. Recommended to the Assembly the formation of a legislative committee in each District Branch. Authorized the formation of a Standing Committee on Disaster and Civil Defense and assigned it to the Coordinating Committee on Community Aspects of Psychiatry. Approved a recommendation by the Long Term Policy Commission that there should be no change at present in the size of the Research Committee. Authorized the formation of a Standing Committee on Mental Deficiency and assigned it to the Coordinating Committee on Technical Aspects of Psychiatry. Approved APA membership in the National Citizens Committee

for Support of the World Health Organization and directed that the dues should be charged against the Council Contingency Fund. Approved a proposed mental hospital procurement study to be made for the Mental Hospital Service by a medical marketing research firm and authorized the Medical Director to seek outside funds to finance the study. Disapproved a Resolution from the Committee on Medical Education that residents should not be permitted to do private practice until they had completed three full years of psychiatric training. Authorized the APA to act as a co-sponsor with the Psychopharmacology Center of the National Institute for Mental Health in a conference on psychopharmacology at no expense to the APA. Authorized the Committee on Public Health to co-sponsor a panel at the November 1956 meeting of the American Public Health Association. Approved the plan proposed by the Committee on Public Health for final disposition of the material compiled in the Committee's survey on the relationship between infectious diseases and mental deficiency. Approved a request from the Committee on Private Practice to conduct a survey among the APA membership on the practice of charging fees to doctors and their dependents by distributing a questionnaire through the *Mail Pouch* with the costs to be charged to the Committee budget. Recommended to the membership the rejection of requests for the establishment of Sections on Carbon Dioxide Therapy and Group Psychotherapy. Directed that in accordance with established APA policy the JOURNAL should not accept for publication an announcement regarding the training of psychotherapists by the American Academy of Psychotherapists.

Executive Committee Meetings, January 5 and March 9, 1957.—Approved regulations to govern the acceptance of gifts, fellowships, awards and grants to the APA, presented by the Committee on Grants and Awards. Approved recommendations by the Committee on Therapy for amplification of the APA Standards for Electro-shock Treatment, provided the phraseology was satisfactory to the Legal Counsel. Approved a request from the Committee on Research for authority to publish additional psychiatric research material as funds become available. Approved a \$300 appropriation to pay the expenses of a guest speaker to the 1957 Annual Meeting, on request by the Committee on Program, and directed that it should be charged to the Annual Meeting expenses. Directed the Chairman of the Coordinating Committee on Technical Aspects of Psychiatry to review and edit the Proceedings of the Philadelphia Regional Research Conference prior to publication. Approved a contract with the Mutual of New York Insurance Company to cover personnel retirement and insurance in accordance with an October 1956 directive of the Council. Approved the solicitation of funds from appropriate sources to conduct a study on the ways in which tranquilizing drugs are affecting the use of nursing and other ward personnel in mental hospitals. Approved the solicitation of funds from

appropriate sources to implement the recommendations of the Ad Hoc Committee in Liaison with the American Academy of General Practice which were approved by the Council in October 1956. Approved the solicitation of funds from appropriate sources to survey the current quantitative use of tranquilizing drugs in mental hospitals, and professional judgments of their effect on patients, hospital programs, and related matter. Changed the schedule for the 1957 fall Committee Meetings to October 24-26 in Washington, D. C. Recommended that the 1957 fall Council Meeting be scheduled on November 22-23 at a site to be determined by the Incoming President. (This date has subsequently been changed to November 23-24.) Recommended to the Council that the Editor of the JOURNAL be instructed to publish annually the reports of the Coordinating Committee Chairman which contain summaries of Committee activities, and that the Coordinating Committee Chairmen be instructed to recommend publication of individual Committee reports which seem to merit general dissemination. Directed that the *Mail Pouch* follow the regulations established for the JOURNAL to govern the acceptance of advertising material. Recommended to the membership the approval of an application from the Greater Miami Society of Psychiatry and Neurology for Affiliate Society status. Approved the annual presentation of a personal gift to the Academic Lecturer at the Mental Hospital Institute, with the expense to be charged to the Institute budget. Approved in principle the scheduling of a Mental Hospital Institute in Canada. Directed the Medical Director to review the APA arrangement with the Mental Health Materials Center and to continue the affiliation on the best available terms. Approved co-sponsorship by the APA with the National League for Nursing of a psychiatric aide teacher-training program as recommended by the Committee on Psychiatric Nursing. Approved the recommendation of the Committee on Public Information regarding a proposed public relations motion picture on psychiatry and authorized the Committee to proceed with negotiations in the matter with the proviso that the film have APA sponsorship. Directed that there should be no change at the present time in the name of the Committee on Legal Aspects of Psychiatry. Directed that APA personnel temporarily employed through grants should be included in the retirement-insurance program when they otherwise meet the requirements established for regular employees. Authorized the Treasurer to pay the expenses for the personnel retirement-insurance program on an annual basis. Approved the establishment of a lectureship at Annual Meeting to be known as the Adolf Meyer Research Lecture and designated the Committee on Research to handle the arrangements. Directed that when the Medical Director or others authorized through his office make application for funds from grants, they should submit to the Executive Committee, via the Treasurer, a detailed budget and that no expenditures be authorized against these funds until the budget has been approved.

Authorized the amending of several budgets for both the 1956-1957 and 1957-1958 budget years with funds received from outside the Association. Directed the Secretary to draft a letter to Mr. Clarkson Hill expressing the appreciation of the Council for his analysis of the APA business practices. Authorized the Medical Director to investigate the possibility of the APA's becoming an additional co-sponsor of Mental Health Week. Approved an official Certificate of District Branch Status to be prepared upon request from such societies, to bear the signature of the Secretary, and to be embossed with the official Seal of the APA. Approved a Divisional Meeting at Miami Beach, Florida on December 1-3, 1958. Empowered the Medical Director's Office to sign an agreement with the U. S. Navy to arrange editorial services. Directed the Committee on Relations with Psychology to seek additional legal advice on the matter of interpretation of certification for psychologists.

Council Meeting, May 11-12 and 16, 1957.—Did not approve a request for Affiliate Society status from the Association for Advancement of Psychoanalysis because the applicant society does not meet the requirements of the By-Laws. Directed that certification by recognized, duly constituted bodies should not be a mandatory requirement for Fellowship but that such information should be utilized along with other data in the determination of the general qualifications of applicants. Established an Ad Hoc Committee to be comprised of former officers of the Association to consider the integration of the work of officers with that of the Central Office staff and to suggest the prerogatives and general responsibilities of the officers. Directed that the Coordinating Committee Chairmen should constitute an Ad Hoc Committee with a comparable group appointed by the Assembly to foster the efficient growth of the Committee structure of the District Branches and the integration of their work with that of the general Committee structure of the APA. Directed that Ad Hoc Committees should be assigned to appropriate Coordinating Committees when feasible. Directed that Ad Hoc Committees must have been in operation for at least two full years before becoming eligible for consideration for conversion into Standing Committees. Directed that a Committee on Committees comprised of the Coordinating Committee Chairmen should be set up to evaluate requests for new Committees, to review constantly the established Committees, and to maintain a roster of personnel resources which can be used by the President in setting up new Committees. Approved in principle the reorganization of several Central Office programs, which provide services to hospitals, into a single administrative division to utilize to better advantage the available personnel. Approved a renovation plan for the APA Home which authorized a total of \$172,000 for this purpose. Directed that the list of deceased members should not be publicly read from the rostrum during the Annual Meeting business sessions but should be suitably honored by some other means. Authorized the formation of a Standing Committee in Liaison

with the American Hospital Association and assigned it to the Coordinating Committee on Professional Standards. Approved a proposed amendment to the Constitution and By-Laws regarding the adjudication of ethical grievances; also approved a proposed amendment to the By-Laws dealing with the publication of APA election results in the JOURNAL and directed that both proposals should be presented to the membership for consideration by mail ballot. Approved a budget for the Conference on Volunteers for the 1957-1958 budget year. Did not approve a request for establishment of a Committee on Social Psychiatry because the Committee on Therapy already encompasses this area. Authorized the awarding of a certificate to Dr. William Menninger in recognition of his continued efforts to obtain increased appropriations from various State legislatures to finance improvements in their respective mental health programs. Received a Resolution from the National Association of Private Psychiatric Hospitals regarding the Central Inspection Board. Suggested that the Incoming President appoint an Ad Hoc Committee to review the work and value of the Central Inspection Board and to investigate the possibility of its becoming a member of the Joint Commission on Accreditation of Hospitals. Directed that future contracts for inspections by the C.I.B. should be approved by the Treasurer as adequate to cover the projected expenses before they are signed. Authorized publication of the C.I.B.-Joint Commission on Accreditation of Hospitals statement regarding the dissolution of their agreement for the inspection of psychiatric hospitals by the C.I.B. Approved a commendation by the C.I.B. to President Braceland for his efforts in obtaining a modification of the original statement in this matter which had been scheduled for release by the Joint Commission. Authorized the negotiation of a 20-year mortgage to raise the \$100,000 needed as additional funds to finance the renovations to the APA Home and authorized the President, Secretary, and Treasurer to negotiate and sign such a mortgage on behalf of the Association. Directed an increase of the annual membership dues, effective April 1, 1958, to \$45 for Fellows and to \$30 for Members, with the dues for Associate Members remaining at \$10. However, after five years as an Associate Member, such dues will automatically be increased to the same level as Members. Recommended to the membership the establishment of the following District Branches: Hawaii Psychiatric Society, Illinois Psychiatric Society, New York State Capital District Branch, South Carolina District Branch, Western New York Psychiatric Society, and Wisconsin Psychiatric Association, Inc. Commended Dr. Mathew Ross, retiring Speaker of the Assembly of District Branches, for his efforts in stimulating the development of the District Branch movement, and the vigorous manner in which he conducted the affairs of the Assembly during the past year. Elected Dr. Francis J. Braceland as Moderator. Elected Dr. Braceland and Dr. Howard P. Rome to serve on the Executive Committee. Approved

a new Procedural Code for the Assembly of District Branches. Recommended to the membership the approval of a revised Constitution for the Connecticut District Branch. Changed the name of the Hawaii Regional Research Conference to the Hawaii Divisional Meeting. Approved a recommendation from the Ad Hoc Committee on District Branch Committees which directed the Chairmen of Standing Committees which belong to Coordinating Committees to keep open and free communication with the liaison representatives of the District Branches. This was set up as a pilot plan. Directed that no action be taken at that time regarding the possibility of extending an invitation to hold the next International Congress of Psychiatry in the United States in 1961, but indicated that the Executive Committee could reconsider the matter. Authorized the Committee on Certification of Mental Hospital Administrators to seek funds to sponsor a two-day conference with the American Hospital Association to study the qualifications necessary for mental hospital administrators. Interpreted the previous action authorizing the Adolf Meyer Research Lecture at Annual Meetings to mean although the Research Committee can submit recommendations to the Program Committee for the choice of the lecturer, the final decision and authority for the arrangements rest with the Program Committee. Approved the principle embodied in a joint report prepared by the Committees on Child Psychiatry and Medical Education regarding the desirability of incorporating, where feasible, child psychiatry training into the preparation of residents in general psychiatry, but emphasized that the manner in which this principle should be applied must be left to the individual training centers. Approved a request from the Committee on Rehabilitation for a formal representation to the proper authority suggesting a change of name for the "President's Committee on Employment of the Physically Handicapped" which will not specifically exclude the mentally handicapped. Authorized the Chairman of the Committee on Public Health to serve as the representative of the APA on a Technical Committee of the Mental Health Section of the American Public Health Association. Accepted the reaffirmation of the State Surveys Program submitted by the Committee on Public Health. Approved a Resolution to the Secretary of Defense suggesting that the **Armed Forces Medicare Program** be extended to include treatment of mental illness. Approved the recommendations of the Incoming President for appointments to the Membership Committee. Approved the continuance of the following Ad Hoc Committees: (1) On Education in Public Hospitals in Liaison with the American Psychoanalytic Association, assigned to the Coordinating Committee on Technical Aspects of Psychiatry; (2) Increasing Responsibility of the APA, designated an independent Committee; (3) Mental Hospitals, assigned to the Coordinating Committee on Professional Standards; (4) In Liaison with the American Academy of General Practice, assigned to the Co-

ordinating Committee on Professional Standards; and (5) Religion and Psychiatry, assigned to the Coordinating Committee on Community Aspects of Psychiatry. Authorized the Medical Director to

sign a contract with a construction firm for the renovation of the APA Home.

WILLIAM MALAMUD, M. D.,
Secretary

TREASURER'S REPORT: AMERICAN PSYCHIATRIC ASSOCIATION

May 13, 1957

The activities of the Association continued to expand during this year.

Total income for the year was.... 658,455.66

Total expenditures..... \$719,133.34

While this totals an excess of expenditures over income of \$60,677.68, it includes figures for payments on pledges to the building fund, and payments on grants, scholarships, and awards from the restricted funds, neither of which can be legitimately considered part of our routine operations. However, these two items approximately offset and if we correct for them the actual operations show our income to be \$59,006.88 less than our expenditures.

The members are perhaps interested in the reasons for the deficit in this year. The auditor's report is available and I would be glad to show it to anyone interested. In summary, the principal reasons for the deficit operations are the fact that the Central Inspection Board, which was expected to be approximately self supporting, in fact, brought in \$37,031.75 less than it spent, and the state surveys which last year showed a profit, partially due to a grant, this year showed expenditures of \$37,723.98 in excess of the income, the deficit offset by carry over from the grant of last year. The Mental Hospital Service which is usually self supporting, this year showed \$9,003.26 more expenditure than income. The American Journal of Psychiatry which costs more than \$100,000 per year to publish and distribute produces income making it necessary to divert only \$27,000 per year from the membership dues. Due to a slight increase in size this year and a special issue, the JOURNAL account exceeded the \$27,000 subsidy from the membership account by just over \$4,000.

Partially offsetting these operations were decreased expenditures by committees and Council and in the Medical Director's and Executive Assistant's offices.

Because our total reserve, excluding the value of the building, is only a little more than \$100,000 it is obvious that we must discontinue some activities in the coming year or immediate measures must be taken to increase the income of the Association. Our present payroll is \$459,758.60 per year.

During this budget year, starting April 1st, additional expenditures to the Association will be made for the retirement and insurance fund for the employees. The annual cost to the Association will be \$17,020. This brings personnel costs to \$276,778.60 per year. In addition, the French have moved from our building and the income from the rent on the new home will not be collected during this year and we must pay rent for quarters in Washington pending the renovation of the building so that it can be occupied by the Washington offices of the Association. This means that during this year the cost of maintenance, insurance and taxes of the new home will be added to our usual expense for rent in Washington with no offsetting income in revenue from rent of the new home.

The members must give serious thought to decisions concerning our financial picture which have been too long postponed. Our scale of operations must be reduced or our sources of income must be expanded. In the past year we have used approximately one-half of our reserves and the coming year will see their total depletion if drastic steps are not taken immediately. This information has been made known to Council and appropriate steps have been taken.

1. First tighter budget controls that the budget committee have recommended for some years have been authorized and we will have quarterly audits rather than annual audits so that the Treasurer and the members can be better informed as to the trends of our financial operations.

2. Some activities are being curtailed.

3. To help your Association's income and to help you with your income tax deductions, Council has increased the dues to the following rates:

Associate Members: ..\$10.00 per year for 5 years.
Then \$30.00 per year.

Members:\$30.00 per year.

Fellows:\$45.00 per year.

This new income should greatly help our financial situation.

JACK R. EWALT, M. D.,
Treasurer

AMERICAN PSYCHIATRIC ASSOCIATION STATEMENT OF CONDITION
MARCH 31, 1957

ASSETS

General Fund:

Cash:

Checking account	\$ 97,137.87
Custodian account	2,476.91
Savings accounts	10,899.41
Petty cash	805.00

\$111,319.19

Marketable securities at indicated value (Schedule A-1)--(Book value -\$80,423.55) ... 110,776.75

Allocated to Funds as below:..... \$222,095.94

Allocated to Special Purpose Funds..... \$ 67,080.16

Allocated to Restricted Funds..... 64,869.31 131,949.47

Total General Fund..... \$ 90,146.47

Special Purpose Funds:

Cash:

Checking accounts	\$ 32,794.13
Savings accounts	25,723.91
Petty cash	10.00

\$ 58,528.04

Land and building, at cost..... 107,063.05

Cash and marketable securities allocated from General Funds (above)..... 67,080.16

Total Special Purpose Funds..... \$232,671.25

Restricted Funds:

Cash:

Checking account	\$ 481.64
Savings accounts	55,337.59

\$ 55,819.23

United States Savings Bonds, at redemption value (Principal amount \$20,600) 17,736.36

Cash and marketable securities allocated from General Fund (above)..... 64,869.31

Total Restricted Funds \$138,424.90

\$461,242.62

LIABILITIES AND SURPLUS

General Fund:

Accounts payable	\$ 19,457.34	
Deferred credit—Overhead	6,060.22	\$ 25,517.56

Unrestricted Surplus (Exhibit B).....	\$121,391.33	
Deduct: Advances to Special Purpose Funds to cover deficit		
Principal Balances (below).....	87,115.62	

Net Unrestricted Surplus.....	\$ 34,275.71	
Valuation reserve—Marketable securities.....	30,353.20	64,628.91

Total General Fund.....	\$ 90,146.47	
-------------------------	--------------	--

Special Purpose Funds:

Accounts payable—American Journal of Psychiatry.....	\$ 6,633.02	
--	-------------	--

Principal balances (Exhibit B)

American Journal of Psychiatry.....	\$ 6,380.64
Annual Meeting	15,496.71
Biographical Directory	8,665.60*
Building Fund	185,052.42
Central Inspection Board.....	67,520.73*
Committee on Certification of Mental Hospital Administrators.....	6,956.35
Contract Surveys	5,206.78
Endowment Fund	199.90
Hospital Architectural Study—Reserve Fund.....	6,312.18
Joint Information Service.....	4,224.12*
Mental Hospital Service and Institute.....	6,705.17*
Special Purpose Donation Account.....	433.25

Net Principal Balances	\$138,922.61	
------------------------------	--------------	--

Add: Advances from General Funds to cover deficit Principal		
Balances (above)	87,115.62	226,038.23

Total Special Purpose Funds.....	\$232,671.25	
----------------------------------	--------------	--

Restricted Funds:

Principal balances (Exhibit B)

Bond-Strecker-Appel Annual Award.....	\$ 13,275.38
Conference for In Patient Psychiatric Treatment for Children.....	2,765.18
General Practitioner Project.....	26,600.27
Hofheimer Prize Fund.....	19,439.64
Hospital Architectural Study Project.....	23,679.02
Isaac Ray Lectureship Award.....	6,402.33
Psychiatric Research Reports.....	13,768.51
Public Relations Conference Project.....	190.87
Sackler Memorial Fund.....	6,258.09
Smith, Kline and French Fellowship Fund.....	26,045.61

Total Restricted Funds.....	\$138,424.90	
-----------------------------	--------------	--

\$461,242.62

* Denotes red figure.

AMERICAN BOARD OF PSYCHIATRY AND NEUROLOGY, INC.

In conformance with the request of The American Psychiatric Association, the American Neurological Association, and the American Medical Association, we are submitting the following account of the activities of the American Board of Psychiatry and Neurology, Inc., since the last report to the Associations by letter dated March 22, 1956.

The Board consists at present of the following members:

Appointed by the American Psychiatric Association:

Dr. David A. Boyd, Jr. (term of office expires December, 1959)

Dr. C. H. Hardin Branch (term of office expires December, 1958)

Dr. Henry W. Brosin (term of office expires December, 1957)

Dr. William Malamud (term of office expires December, 1960)

Appointed by the American Neurological Association:

Dr. Harvey Bartle, Jr. (term of office expires December, 1959)

Dr. Knox H. Finley (term of office expires December, 1957)

Dr. Francis M. Forster (term of office expires December, 1960)

Dr. Paul I. Yakovlev (term of office expires December, 1958)

Appointed by the American Medical Association:

Dr. Russell N. DeJong (term of office expires December, 1958)

Dr. L. M. Eaton (term of office expires December, 1960)

Dr. Francis J. Gerty (term of office expires December, 1959)

Dr. George N. Raines (term of office expires December, 1957)

At the annual meeting of the Board in December, 1956, the following officers were elected:

Dr. George N. Raines, President

Dr. Paul I. Yakovlev, Vice-President

Dr. David A. Boyd, Jr., Secretary-Treasurer

The annual meeting of the Board was held in New York City in December, 1956. At this time, 266 candidates were examined by the Board. Of this number, 144 were certified in Psychiatry, 12 in Neurology and none in Neurology and Psychiatry.

When the Board met in New Orleans, La., March, 1957, 205 candidates were examined. Of this number, the Board certified 115 in Psychiatry and 13 in Neurology, and none in Neurology and Psychiatry.

Since its inception, the Board has received 8,261 applications. Some of these are still under consideration. The total number of diplomas issued by the Board to date is 5,885. Of this number, 4,524 are certified in Psychiatry 389 in Neurology, and 972 in Neurology and Psychiatry.

DAVID A. BOYD, JR., M.D.,
Secretary-Treasurer

TO AESCULAPIUS

With Aesculapius, the physician,
That cures all sickness, and was Phoebus' son,
My Muse makes entry; to whose life gave yield
Divine Coronis in the Dorian field
(King Phlegius' daughter), who much joy on men
Conferr'd, in dear ease of their irksome pain.
For which, my salutation, worthy king,
And vows to thee paid, ever when I sing.

—HOMER

(Hymn to Aesculapius,
George Chapman, trans.)

OFFICIAL NOTICE

AMERICAN PSYCHIATRIC ASSOCIATION OFFICIAL BALLOT FOR VOTING ON PROPOSED AMENDMENTS 1958

Proposition No. 1

This is a proposal to amend the Constitution by giving the Council authority to reprimand, or admonish a member, or for a limited period, suspend him from the privileges of membership for certain unethical practices of behavior. The specific offenses are detailed in proposition no. 2. The following would provide Council with the Constitutional authority to initiate disciplinary action.

(1) Article VII of the Constitution is amended by adding thereto a new section to be designated section 9, reading as follows:

9. Council shall have the power to direct the President to admonish or reprimand a member whenever such action is authorized by a two-thirds vote of the Council, and when by a two-thirds vote of the Council such action is determined to be in the best interests of the Association. The Council shall have power to suspend a member from the privileges of membership whenever the Council by a two-thirds vote determines that such action would be in the best interests of the Association. Such suspension, however, shall be for a period not in excess of one year, and may be for a lesser period.

Proposition Number 2

This makes the changes in the by-laws necessary to implement proposition 1. It would be inconsistent to vote "yes" on proposition 1 and "no" on proposition 2 or *vice versa*. The changes in the by-laws proposed below also spell out the procedure to protect the rights of the members concerned.

(2) ARTICLE III of the By-Laws is amended as follows:

The title of the Article is changed from RESIGNATION AND DISMISSAL to RESIGNATION AND DISCIPLINARY ACTIONS.

In section 2 of this Article, the first "shall" is changed to "may," so that section 2, as amended, opens with the following words:

"2. The name of any member declared unfit for membership by a two-thirds vote of the members of the Council present at any annual meeting of that body may be presented by the Council to the Association" . . . (continuing as before.)

The following sections are now added to Article III of the By-Laws:

3. A member may be admonished, reprimanded, expelled or suspended from the privileges of membership if such action is determined and voted by two-thirds of the Council; provided Council by a two-thirds vote shall determine that such member has been engaged in unethical or unprofessional conduct, or has wilfully refused to comply with resolutions or requests of the Council, or brings discredit or dishonor on the Association or on the practice of psychiatry or if he has been convicted of a crime involving moral turpitude.

4. An Ethics Committee is hereby created consisting of six Fellows, one or two of whom shall be past Presidents of the Association. The terms of each member shall be so adjusted that each year two seats will become vacant, and in each succeeding year the incoming President will appoint members to fill the two ensuing vacancies on the Committee.

The President will designate from the membership of the Committee a Chairman, and the term of the chairman shall be for a period of one year. Succeeding Chairmen shall likewise be appointed by the President. Vacancies developing during the term of any member of the Committee will be filled by designation of the President who will name an *ad interim* member or Chairman for the unexpired portion of the term of each person whose seat had become vacant.

5. All instances of behavior denounced in Section 3 of this Article, and reported to the Secretary of the Association, will be referred by the Secretary to the Ethics Committee.

This Committee will investigate such allegations, hold a hearing or hearings as the Committee determines to be necessary, and shall thereafter report to the Council, furnishing to the Council findings and recommendations of the Committee. Each member appearing at any hearing of the Ethics Committee under this Article shall be entitled to be represented by counsel, who may be a member of the Association or an attorney at law.

6. Any complaint concerning the behavior denounced in Section 3 of this Article shall be referred to the Ethics Committee. Any person, including any member of this Association, may make such a complaint. Each complaint shall be in writing, and shall be signed by the party making the complaint. On receipt of a complaint, the Ethics Committee shall determine whether the complaint is without merit or is frivolous, and if it so determines, the complaint shall be filed without any further action, except to report thereon to the Council. On receipt of such a report from the Ethics Committee, the Council shall have the authority by majority vote to determine whether the complaint shall be laid on the table or whether to order it revived for further study and recommendations by the Ethics Committee.

7. If the Ethics Committee, by majority vote, determines that a complaint against a member warrants further study, or if the Council directs it to make such study, the Ethics Committee shall fully investigate the matter. For this purpose, the resources and the offices of the Association will be made available to the Ethics Committee. If requested by the Chairman of the Ethics Committee, the appropriate District Branch of the Association will assist the Ethics Committee in this investigation. At the conclusion of its investigation and after hearing, the Committee shall make a report to the Council by majority vote, summarizing its findings and recommendations. Any member under investigation is entitled to a thirty-day notice in writing, advising him of the nature of the charges against him, and advising him of the date set by the Ethics Committee of a hearing of the complaint. Any member so charged and notified is entitled to appear before, and to have a hearing by the Ethics

Committee, and to the right of counsel. Any member, if unwilling or unable to travel to the place of hearing, is entitled to submit his answers to the charges in writing. Any member, if unwilling or unable to travel to the place of hearing, on demand in writing addressed to the Ethics Committee, is entitled to appear before one or more examiners designated by the Ethics Committee, who need not be members of the Ethics Committee. Every examiner, however, shall be a Fellow of the Association, who is willing and able to go to the place where the member requests that his hearing be held. Each examiner will report on the facts adduced at such a hearing, together with recommendations thereon to the Ethics Committee. The Ethics Committee is then authorized to take action thereon as indicated in the Constitution and By-Laws.

8. Counsel selected by a member to appear before the Ethics Committee concerning charges against the member will be afforded the right to appear personally before the Ethics Committee; and if he so desires, is entitled to submit briefs on behalf of the member so charged. Such briefs are to be received and considered by the Ethics Committee and by the Council.

9. The Ethics Committee, if it shall determine by a two-thirds vote to recommend that a member be admonished, reprimanded, suspended, or expelled from membership in the Association, shall report its findings and recommendations to the Council for action. The Council shall receive the report, including the findings and recommendations of the Ethics Committee, and the Council shall have authority to admonish, reprimand, suspend, or expel a member from membership in the Association by a two-thirds vote. The Council, if it does not concur in the recommendations of the Ethics Committee for a reprimand, admonition, suspension, or for the expelling of a member, shall, by majority vote, determine whether the matter be closed without disciplinary action. The Council shall notify the member named in the charges of its action. The Council's action will be taken by resolution which shall be recorded in its minutes.

10. The Minutes of the Council's meeting will show the nature of the complaint, the name of the member concerned, the findings and recommendation of the Ethics Committee, and the final action taken by the Council. Unless the member desires it, the name of the member will not be included in the Council's open report read at the Annual Meeting of the Association, nor in the minutes published in the JOURNAL. Any

member having a legitimate interest therein may inspect the Council's full minutes at the office of the Association.

Proposition No. 3

This would remove the requirement that the full text of an election be publicly broadcast.

(3) The last sentence of section 6, Article 6 of the By-Laws is repealed, and in its place the following is inserted:

The full text of the certificate will be filed in the Secretary's office for inspection on request by any Member or Fellow. The net result of the poll, giving only the names of successful candidates, and the text of successfully passed amendment will be announced at the Annual Meeting and published in the JOURNAL.

MUTABILITY

What man that sees the ever-whirling wheel
Of Change, the which all mortal things doth sway,
But that thereby doth find, and plainly feel,
How Mutability in them doth play
Her cruel sports, to many men's decay?

—SPENSER

VALUES

Not all the purple pomp of ancient Kings,
Consuls acclaimed by hosts armipotent,
Caesars upborne on Victory's golden wings,
Augustis girt with war's paludament,
Popes at whose feet the prone world tribute flings,
Are worth one poet's song, one violet's scent.

—JOHN ADDINGTON SYMONDS (1883)

COMMENT

CRIME AND PUNISHMENT

In the field of criminology there are 4 major issues of serious concern; 1. the steady increase in crime, 2. the disproportionate increase in the number of youthful criminals, 3. the question of capital punishment, 4. the criteria by which criminal responsibility may be tested. As a part of this latter issue is the continuing disgrace of the "battle of experts."

The question of the merits or demerits of capital punishment will not be considered here, beyond raising the question whether opposition to this manner of terminating a capital criminal case may not be based somewhat more on sentimental or metaphysical than realistic grounds, perhaps harking back also to an echo of a visionary credo "Reverence for Life."

As a bare matter of record it may be noted that a bill to abolish capital punishment passed by the British House of Commons in 1956 was rejected by the House of Lords by a vote of 238 to 95, the largest ballot in the upper chamber in many years.

The Compromise Bill of 1957 approved by the British Parliament retains the death penalty but restricts it for 5 classes of "capital" murder (1. shooting or causing explosions, 2. killing police officers, 3. killing prison officers, 4. killing during theft, 5. killing while resisting arrest), and to repeated killers. The penalty for "non-capital" murders is life imprisonment. (In connection with the revised status of the murderer in England a newspaper correspondent reports from Cleckheaton under date of July 15, 1957, "more than 50 murders in the 16 weeks since the House of Commons abolished the death sentence for all but a few categories of murder." Only one killer faced the death sentence as his crime happened to fall in category 4 above.)

In 1938 the Labor government in Britain attempted to force through a bill to suspend imposition of the death sentence for a period

of 5 years. The bill was thrown out in the House of Lords by a vote of 181 to 28.

The government of India, where some 9,000 murders are reported annually, has opposed efforts of religious groups, which do not countenance the taking of life in any form under any conditions, to have the death penalty abolished. All the States of India save one—the home of the principal Buddhist shrine—are against abolition. Bills opposing capital punishment have been tabled in both Houses.

In Canada a special committee of the House of Commons and Senate, after a 2-year study, reported to the Parliament in July 1956 favoring retention of the death penalty. The Attorneys General of all but one of the 10 provinces, the exception being Saskatchewan, voiced this opinion.

The question of criminal responsibility has been argued for generations. Of late it has received renewed attention as a result of the test established in the Durham case in the District of Columbia, and which seems deceptively simple and satisfactory. It will probably work though, until some fussy cross-examiner bears down on the definition of "mental illness" which may be about as difficult to define as "insanity"; and we remember what Lord Blackburn said about that.¹ It may not be unfair to ask whether the proponents from time to time, of new rules entertain, possibly, the hope that a perfect rule may be achieved. In any case, considering the material on which a ruling must be made, it is reasonably safe to say that a perfect rule has never been, and is not likely to be, set up. We must do the best we can. Certain approximate criteria were proposed 114 years ago. They have somehow worked. When a procedure works that, according to

¹ "I have read every definition which I could meet with and never was satisfied with any of them, and I have endeavored in vain to make one satisfactory to myself. I verily believe it is not in human power to do it."

William James—or at least the pragmatic side of him—is a pretty fair test of its validity, or at least of its usefulness.

The alarming increase in crime is the stigma of our time, and nothing less than a national disgrace. J. Edgar Hoover, director of the F.B.I. reports (*New York Times*, Apr. 25, 1957) that since 1950 crime has increased almost four times as fast as the population—crime increase, 43%; population increase, 11%. The most disturbing feature of the situation is the mounting numbers of juvenile crimes and criminals. Mr. Hoover states that arrests of juveniles in 1956 increased 17.3% over 1955, whereas arrests in other age groups were only 2.6% higher. This does not mean that there was a disproportionate increase in the number of youthful persons in the population; this increase was only about 3%. More than 40% of the juveniles arrested during 1956 were under 15 years of age, the F.B.I. director reported. "Juvenile delinquency," he states, "is a product of adult neglect . . . a tragic failure of the home, the school, youth organization, and, in fact, the entire adult community. . . . Far too many mothers and fathers today are parents in name only." Whatever causes we may assign, the disconcerting fact is that the combined efforts of all the agencies that have been active over the years in guiding and safeguarding the youthful members of society have failed insofar as stemming the rising tide of juvenile crime is concerned.

In a special editorial in the *FBI Law Enforcement Bulletin*, addressed to all law enforcement officers, and from which we quote with Mr. Hoover's permission, he speaks bluntly and his words require the consideration of the rest of us as well as of the law enforcement officials:

Are we to stand idly by while fierce young hoodlums—too often and too long harbored under the glossy misnomer of juvenile delinquents—roam our streets and desecrate our communities? If we do, America might well witness a resurgence of the

brutal criminality and mobsterism of a past era.

Gang-style ferocity—once the evil domain of hardened adult criminals—now centers chiefly in cliques of teen-age brigands. Their individual and gang exploits rival the savagery of the veteran desperadoes of bygone days. Recent happenings in juvenile crime shatter the illusion that softhearted mollicoddling is the answer to this problem.

Citing a number of instances of atrocious youthful crime, Mr. Hoover continues:

The present appalling youth situations—the crux of our crime problem—demands a vigorous new appraisal. No longer can we tolerate the "tender years" alibi for youthful lawbreaking. This is certainly no time for police to be shackled by illogical restraints based on unreasoned sympathy for these young thugs. Publicizing the names as well as crimes for public scrutiny, release of past records to appropriate law enforcement officials, and fingerprinting for future identification are all necessary procedures in the war on the flagrant violator, regardless of age. Local police and citizens have a right to know the identities of the potential threats to public order within their communities.

The murder of a Maryland school teacher by a 14-year-old student last summer illustrates the danger of unwarranted secrecy. Described as "terrible-tempered" and beyond school disciplining, the boy was expelled from a North Carolina school following a threat to kill his teacher. To avoid corrective action, he was quietly sent off to live and attend school in Maryland. His violent tendencies, kept hidden from both his old and new neighbors, erupted in a classroom tragedy six weeks later when he put a fatal bullet through the heart of one teacher and wounded two others.

Certainly, reasonable leniency for children committing first offences and minor violations is a proper consideration. However, the present major problem is no longer one of bad children but of young criminals. Law enforcement cannot be administered solely according to the yardstick of age. Justice must be meted out to each individual criminal in such measure and manner as the welfare and protection of society demand.

These are strong words, but they are also temperate. May it be that the trends of our boasted humanitarian age toward softness *vis-à-vis* crime in general and youthful crime in particular, and our adherence to the fetish of juvenile irresponsibility, have gone just a little too far?

VETERANS ADMINISTRATION PROGRAM CHANGES

The medical director of the Veterans Administration deserves a special note of commendation for recognizing the need to modify the new two-thirds/one-third rule

with regard to psychiatric residents, *i.e.*, 2 years in a V.A. installation, 1 year in university or other rotations.

We understand that exceptions to this

rule are now recognized as necessary. Such rotations, for instance, that include a block of time in a neurophysiology laboratory, or in a child guidance clinic, are different from the usual hospital service for the sick, either inpatient or outpatient.

Speaking for myself, as well as others who are heading up psychiatric residency training programs, I can say that I have been quite concerned over the new ruling in the V.A. making it mandatory for a resident in the V.A. university training program to spend 2 years in a V.A. installation and only 1 year in university and other training programs. If it is true that there are now some exceptions to this rule, that is, stretching the 1 year, for such block rotations as neurology, child psychiatry, etc., then I think Dr. Middleton has chosen a highly desirable course.

Furthermore, if it is true that a resident may spend more than 1 year in other than V.A. stations by rotating part-time, 1, 2, or 3 afternoons a week while working on a V.A. service, then this fact should be made known to heads of training programs. While I personally believe that nothing less than a block of 6 months full time in a child guidance clinic is of much use to a resident, one could profit by 2 or 3 afternoons a week for a year in an adult psychiatric or neurological outpatient clinic.

I believe that broadening these regulations will do a great deal toward increasing the number of applicants for psychiatric residency training in the V.A.

It is most heartening to read in this year's annual report of the number of research programs that are being carried on in V.A. hospitals, and the number of research positions that are being offered. This in itself is going to do much to enhance the value of the V.A. psychiatric residency training pro-

grams. This will make the 3-year training programs in the V.A. more attractive than ever.

There has been a great hue and cry of late to integrate psychiatric training programs, meaning that there will be no V.A. residents, but only university residents, and the university will rotate the residents where it wishes and for only such periods as it wishes, so long as each hospital pays for the resident while he is there. The same amount of stipend money can naturally buy more residents if they spend only 6 months on a V.A. service—as in some integrated programs; but most fully approved V.A. psychiatric residencies have more to offer a resident than that. This may work for surgical and medical training programs, but certainly not for the average university V.A. psychiatric training program where identification with the service and continuity of treatment are so important for the patients.

This comment is in no way intended to be a criticism of any V.A. training program, rather is it the reverse. I feel that V.A. hospitals and university medical schools have done much to further the training potentialities of each other.

The institutionalized psychiatrist is becoming a thing of the past. Today he must be community conscious. The young psychiatrist on State payrolls now is likely to spend as much time outside of the institution as in, and more and more V.A. hospitals are developing true outpatient clinics for the treatment of patients and their families from the community.

Raising the standards of training and service in our great public institutions, local, state, and federal, is a sure way of doing a better job of treating the mentally ill of America.

S. S. A.

The Spirit grows with its allotted Spaces
The Mind is narrowed in a narrow Sphere

—From the Mural "Westward the Course of
Empire Takes its Way" in the Capital,
Washington, D. C.

NEWS AND NOTES

THE WORLD MEDICAL ASSOCIATION.—The 11th General Assembly of The World Medical Association will convene in Istanbul, Turkey, Sept. 29-Oct. 5, 1957, in the Conference Hall, Faculty of Science, University of Istanbul.

The theme of the assembly, celebrating its first decade of activity, will be: "Solidarity, the Key to Medical Advancement." Program topics will include: 1. The Utilization of the Hospital in Providing Medical Care; 2. Protection for the Civilian Medical Team in Times of Armed Conflict; 3. The Interdependence of the Medical and Pharmaceutical Professions; 4. Medical Editor's Meeting; 5. Scientific Session: "Advancements in Medical Practice in Turkey."

The World Medical Association is the only organization at the international top level that can represent the opinions of the practising doctors of the world. Its current membership includes 53 national medical associations of the free world, representing more than 700,000 doctors. Address of the W.M.A.: 10 Columbus Circle, New York 19, N. Y.

SOUTHERN REGIONAL COUNCIL ON MENTAL HEALTH.—Mr. Paul Harkey, Oklahoma attorney, has been elected chairman of the Southern Regional Council on Mental Health Training and Research. Elected vice-chairman is Dr. M. A. Tarumian, state psychiatrist for Delaware. Three other council members were elected to serve on the executive committee: Dr. Mary Carl, University of Maryland School of Nursing; Dr. Nicholas Hobbs, George Peabody College for Teachers, Nashville, Tenn., and Dr. Cyril J. Ruilmann, Tennessee Commissioner of Mental Health.

The Council was established in 1954 as part of the program of the Southern Regional Education Board. Its purpose is to aid states in training more personnel for mental health programs and increasing research in this branch of medicine. Address of the Council: 881 Peachtree St., N. E., Atlanta 9, Ga.

RUBIN FOUNDATION AWARD TO DR. HOCH.—The first annual Samuel Rubin Foundation Award was made to Dr. Paul H. Hoch, N. Y. State Commissioner of Mental Hygiene, for the most important contributions in the mental health field in 1956. The award was made at the annual dinner of the Postgraduate Center for Psychotherapy, Hotel Delmonico, N. Y., last June, and presented by Mr. Rubin, president of Faberge, Inc.

DR. HUNT HEADS HUDSON RIVER STATE HOSPITAL.—Dr. Paul Hoch, Commissioner of Mental Hygiene, N. Y. State, has announced the appointment of Dr. Robert C. Hunt as director of Hudson River State Hospital. Dr. Hunt is currently director of Erie County Community Mental Health services and associate clinical professor of psychiatry, University of Buffalo School of Medicine. The appointment becomes effective September 1, 1957. Dr. Hunt succeeds the late Dr. O. Arnold Kilpatrick who died in March.

Dr. Hunt has served over 23 years in the department. As assistant commissioner for nearly 5 years, he headed the division of community mental health services since its inauguration in 1954.

THE AMERICAN NEUROLOGICAL ASSOCIATION.—At the 82nd annual meeting of The American Neurological Association held in Atlantic City, N. J., June 17-19, 1957, the following officers were elected for the coming year: president: Israel S. Wechsler; president-elect: Bernard J. Alpers; 1st vice-president: Russell N. DeJong; 2nd vice-president: Bronson S. Ray; secretary-treasurer: Charles Rupp; assistant secretary: William F. Caveness.

The 83rd annual meeting of the Association will be held at the Claridge Hotel, Atlantic City, June 16-18, 1958.

S.K.F. FOUNDATION FELLOWSHIPS.—The American Psychiatric Association has announced the award of 19 Smith, Kline &

French Foundation Fellowships in psychiatry. Thirteen of these enabled medical students to participate in psychiatric research or training programs in the summer, and 2 other students programs are just starting. In all, 34 undergraduates from New York State to Washington will participate in projects ranging from a study of the chemical functionings of the brain to an analysis of suicide rates.

The Smith, Kline & French Foundation is the independent philanthropic arm of Smith, Kline & French Laboratories, Philadelphia. The Foundation has given The American Psychiatric Association a total grant of \$90,000 for the 3 years 1955 through 1957. The fellowships established through this grant are administered by a committee named by The American Psychiatric Association.

AWARD TO DR. SILVERMAN.—Dr. Baruch Silverman, director of the Montreal Mental Hygiene Institute recently received a citation and a \$1,000 award for his contribution to mental health in Canada. The award was presented at the annual meeting of the Institute. Dr. Margaret Mead, president of the World Mental Health Federation was the guest speaker at this meeting.

POSTGRADUATE COURSE IN PSYCHOSOMATIC MEDICINE.—The department of psychiatry of the Temple University Medical Center is inaugurating a postgraduate course in psychosomatic medicine beginning October 2, 1957. The course will include supervised clinical experience as well as lectures and demonstrations, and will run for 20 Wednesday sessions, supported by a grant from the Smith, Kline & French Foundation of \$3,580. It is open to general practitioners, medical or surgical specialists, State hospital psychiatrists, as well as psychosomatic specialists.

H. Keith Fischer, M.D., will direct the course presented by a group of faculty members headed by Edward Weiss, M.D., and O. Spurgeon English, M.D.

PSYCHIATRIC RESEARCH REPORTS No. 7.—The Washington office of the A.P.A. has recently issued the 7th in its series of re-

search reports. The 7th report contains the papers delivered at the A.P.A. regional research conference at McGill University Nov. 18-19, 1955 and is titled, "Stress; Experimental Psychology; Child Psychiatry," and edited under the chairmanship of Jacques S. Gottlieb and consultant editor Robert A. Cleghorn. Orders should be addressed to: Psychiatric Research Reports, American Psychiatric Association, 1785 Massachusetts Avenue, N. W., Washington 6, D. C.

ACADEMY OF PSYCHOSOMATIC MEDICINE.—The program of the 4th annual meeting of The Academy of Psychosomatic Medicine to be held October 17-19, 1957, at the Morrison Hotel, Chicago, will be devoted to "Psychosomatic Aspects of Obstetrics, Gynecology, Endocrinology and Diseases of Metabolism." The meeting will be open to all scientific disciplines, as well as psychologists, social workers and nurses. Information may be obtained from Dr. William S. Kroger, Secretary, 104 South Michigan Avenue, Chicago 3, Ill.

EASTERN PSYCHIATRIC RESEARCH ASSOCIATION.—The program of the second annual meeting of the Association is as follows:

Friday, October 11, 1957, at Kings Park State Hospital: Symposium on succinylcholine technics with clinical demonstrations; Symposium on electro-sleep technics with clinical demonstrations.

Saturday, October 12, 1957 at the Waldorf Astoria Hotel, N.Y.C.: Round Table Discussions on the following topics: The function of the anesthetist in electroshock-therapy; the newer psychiatric drugs; experimental investigations; the usefulness of non-convulsive technics, etc.

Symposium on progress in genetic psychiatry.

Award of the R. Thornton Wilson \$1000.00 Prize on genetic or preventive psychiatry to the author of the presentation adjudged best in the Symposium on progress in genetic psychiatry.

There will be a registration and luncheon fee for the Waldorf Astoria Hotel Meeting; but no registration, luncheon or other fee for the Kings Park State Hospital Meeting.

The Meetings are open to all members of the medical profession.

BOOK REVIEWS

CRIME, COURTS AND PROBATION. By Charles Lionel Chute and Marjorie Bell. (Toronto: The Macmillan Co., 1956. \$4.75.)

Charles L. Chute was executive director of the National Probation and Parole Association for many years. He began this book shortly after his retirement but died before he could finish it. Miss Marjorie Bell, assistant director of the National Probation and Parole Association and the editor of its magazine, *Focus*, completed it. Anyone who has worked on another's unfinished manuscript knows the difficulties she faced. Miss Bell, however, has done an admirable job. The book contains an excellent introduction by Roscoe Pound whose interest in probation is well known.

The book is an accurate and gripping history of probation and its development. But it is much more than this. Chute's and Bell's own views are expressed, sometimes vehemently. The book's opening sentence is typical and startling. It might even alarm the uninitiated. It reads: "Threading through the history of civilization, the trail of pursuit and punishment of the law-breaker, is almost as bloody as the trail of crimes committed."

The first chapter vividly recites the ferocious punishments applied, until recently, under the Anglo-American systems of criminal sanctions. In this connection Chute and Bell note that flogging, both of adults and children, under court order in England was not finally abolished until 1948, and that the whipping post is still legal in Delaware and Maryland. The authors point out the often repeated truism that severity defeats its own purpose.

Succeeding chapters deal with the development of probation in England and in the United States. Early plans for the humanizing of criminal penalties arose first in England. Systems of recognizance and transportation were created. The authors point out that individual social treatment of criminals was first employed in the cases of children and youthful first offenders and that early in the nineteenth century English magistrates themselves experimented with a rudimentary probation system to avoid sending young and inexperienced offenders to prison. *Wile*, Matthew Davenport Hill, the famous Recorder of Birmingham, who in 1841 employed parents and masters of apprentices as probation officers. It was not until 1907 that Massachusetts organized the first official probation service in the United States. The Massachusetts system was studied by Parliament and served as the basis for a bill introduced into the House of Commons in 1907.

Crime, Courts and Probation lays emphasis on the very able work done by John Augustus, the pioneer in probation work in this country. This remarkable man first took under his care only men charged with drunkenness. Later he supervised both men and women charged with other offenses.

Augustus' work was entirely voluntary and carried on at his own expense.

A very considerable portion of the book is devoted to the work of Chute and others in securing the enactment of the Federal Probation Act. Anyone who has worked with Congress will find these chapters intensely interesting. They demonstrate Chute's tenacity when he desired to put a fine idea into effect. It is interesting to note that even as late as 1919 there were judges who felt that probation would detract from the efficiency and majesty of the law. But many lawyers and judges were of the contrary view and, I am glad to say, did not hesitate to lend their support to the enactment of the legislation.

This book is an impressive one. It gives the only complete review of the creation of the probation systems that the writer has encountered. The work is a mine of information, accurately presented. It should be in the library of every person who is interested in the Anglo-American system of punishment. The authors have performed a not inconsiderable public service.

JUDGE JOHN BIGGS, JR.,
U. S. Court of Appeals,
Philadelphia, Pa.

MENTAL HEALTH AND HUMAN RELATIONS IN INDUSTRY. Edited by T. M. Ling. (New York: Paul B. Hoeber, Inc., 1955. \$6.00.)

This book is not only intensely interesting and stimulating but it is also delightful reading, and should be read by everyone who comes in contact with management in industry and in the relationships between people in all categories. Certainly all psychiatrists, industrial physicians and personnel officers should be thoroughly familiar with its contents.

Dr. T. A. C. Rennie's introduction succinctly states the meaning of it all: "There can be high industrial morale with contentment and happiness for both employees and managers and industrial stability only when men feel strongly that what they are doing is worthwhile and worthy of them, when all have a real sense of participation in the total task, when there is mutual acceptance of one another's contribution to the whole enterprise, and when there is congenial and democratic give-and-take in all working relationships."

Lord Horder points out that in accepting modern conditions of work, an individual may submerge himself for the good of the unit and in support of the total effort. He maintains his individuality through his interest in the total scheme of things and his participation in the affairs of the community.

T. M. Ling, in beautiful simplicity, explains the goal of man's struggle—"The business of life is always to seek the highest and to do the best possible."

sible in any situation." He shows that it is the function of a mental health program in industry to insure the maximum of collective achievement with the minimum of individual stress.

Ling also covers causation of accident, illness and the emotional factors involved, and the responsibility of management in convalescence and rehabilitation. He indicates that "the program extends beyond medical care to social-economic problems calling for combined action by the doctor, the personnel manager, the industrial psychologist and others."

V. W. Wilson thoroughly discusses the need for careful selection, thorough training, recognition of emotional needs, and the usefulness to every man of social relationships on and off the job. He also includes matters pertaining to the significance of positions, promotions and transfers as related to mental health. The need for harmony in top groups to engender harmony in sub-groups is apparent, and ways of bringing this about are explained. He has stressed "the need for careful consideration of the individual and the group in achieving efficiency in an industrial organization."

In discussing environmental factors influencing health, H. G. Maule writes of factory and plant layout and the importance of adapting machine to the functional requirements of man in an effort to lessen stress. He also suggests the need for work arrangements in such a way that there may be job completion not only as a production aid but to establish contentment and a sense of satisfaction and accomplishment on the part of the worker.

The responsibility of management for the health of employees is discussed by Dr. J. J. O'Dwyer, who also stresses the necessity for specially trained medical staff, who may then have the ability to work well with management and with the worker. He places the responsibility for the establishing of a healthy mental climate upon the cooperation of a health team with administrators and technical experts.

In outlining the obligations and contributions of the personnel managers, H. Watton Clark has clearly shown that the successful discharge of the personnel manager's responsibility in relation to mental health rests to a large extent on the effectiveness of communication between his department and the other departments of the company. The keynote is full information and full cooperation all along the line.

Signs of aggression and methods of handling these emotional strains are discussed by R. F. Tredgold who suggests substitute channels of release such as sports, etc., but more fundamentally indicates the need for thoughtful planning to avoid situations and conditions which will bring about animosity and arouse antagonism. He also portrays the place of the psychiatrist in industry and outlines some of the problems the psychiatrist may meet and some of those he may inadvertently create. The need for collaboration between the industrialist and the psychiatrist is most essential. It is important that the psychiatrist indicate clearly what he has to offer and in a decidedly practical manner. "He must understand the background of industrial behavior, the language and conversation of in-

dustry. . . . He must be able to listen and to discuss policies with top management and he must be able to walk through the factory and talk easily with the workers at the bench. . . . He must learn that he may teach. . . . He must handle groups as well as individuals."

Cases are frequently referred to the industrial psychiatrist by other industrial physicians, but it is up to the psychiatrist to recognize the patient in his work-setting and in his social environment.

The psychiatrist can contribute in research, in treatment, in education, and in selection. The essential factor is the building up of understanding between industry and psychiatry.

"The object of research in industrial management is not always to make it possible to alter the situation, though this must be dealt with, but rather to alter one's method of adaptability most effectively to the situation as it is." With this observation, Dr. James F. Scott broadens the concept of research in industry and indicates that those in this field should have a clear understanding of management and a clear understanding of the worker, for this is a highly specialized field and requires a full appreciation of the practice of industrial management.

The interplay between society and work is interestingly presented by Dr. T. A. Lloyd Davies, who positively states that work is a social habit. With this concept many reasons why a man works are outlined and discussed. That the selection of certain jobs is often based upon social reasons, such as because friends are there, demonstrates the need for conformity and for group association which leads to group interests and eventually establishes job standards.

A. M. Smith has indicated that a job must have meaning, and must be worth doing, and that when the work is right, the worker will be healthy.

In summation, T. A. Ling points out that teaching of human relations in industry should start from the top and work down; that the teaching should be dynamic with wide use of group discussions. He presents an interesting review of studies now going on in reference to human relations in industry throughout the world.

N. C. Rimmer reviews the implications of this book for management. He clearly understands the pertinent, significant and practical values that are available here. In discussing leadership, he indicates that a successful manager must like, understand and accept responsibility for people; develop a scientific attitude toward his worker; he must be articulate and develop skill in expression appropriate to the occasion. He must also feel personally the issues involved. He observes that the teaching of mental health in human relations demands the practice of good mental health in human relations and in the training situation.

Management is invited by this book to look at the "whole man" and to examine the "total situation." It appeals for greater understanding of basic human needs and of what exists below the surface in interpersonal relationships.

BALDWIN L. KEYES, M. D.,
Philadelphia, Pa.



ALAN GREGG, M. D

IN MEMORIAM

ALAN GREGG, M. D., 1890-1957

Alan Gregg was the friend of countries and institutions and medical scientists around the globe wherever the advancement of the healing art might serve the needs of mankind. During 20 years as director of the medical sciences of the Rockefeller Foundation he was able by wise counsel and the awarding of substantial grants to promote medical teaching and research in many lands.

Only last year he left his New York office in the heights of Rockefeller Center, and his post as vice-president of the Foundation and retired to his house in the mountains of California.

Retirement cannot be said to have ended his professional career, for the work he initiated does not stop and the lines of advance he charted will continue.

A native of Colorado Springs, Dr. Gregg received his medical degree from Harvard and after his intern year and another year with the Harvard Medical Unit attached to the British Army in World War I, he joined the International Health Board of the Rockefeller Foundation (1919), with which organization he was to devote his professional life.

If ever a man seemed chosen for a specific job by the arbiters of fortune, Dr. Gregg was the man and this was his job. As director of the medical sciences of the Foundation he had power and the wisdom to use that power, and world medicine is the better for that collaboration and support. As the New York Times comments editorially, "Alan Gregg has laid down patterns that medical men are likely to follow for a long time."

In his wide view as medical statesman he gave thought to the immediate task that lies before the medical and allied sciences, "to make use of the immense store of knowledge accumulated in the past eight decades and particularly in the past two or three" to insure the better health of all the people. He noted the difficulties attendant upon the

rising costs of medical and hospital services of all kinds and expressed a preference for voluntary prepayment plans rather than those state ordered and directed.

Dr. Gregg's purview included the broad field of public health, but in some areas he had a special interest. One of these was psychiatry. "I am most interested in the human side of medicine," he said. From the first he realized that developments in this segment of medical science was not on a par with those in other segments and that one of the reasons was its lack of integration into the whole body of medicine. He lent his help to the correction of these faults, and when on retirement he looked back over the years, he could feel that his efforts had indeed contributed materially to the better state of affairs that exists today.

When the centenary of The American Psychiatric Association, of which Dr. Gregg was an Honorary Fellow, was to be celebrated at the annual meeting in 1944, it was recalled that 50 years earlier Weir Mitchell had been invited as a non-member of the Association to criticize the psychiatry of that day—*asylum psychiatry*. Accordingly it was felt that at the 100th anniversary a qualified critic should again be sought. The choice naturally fell upon Alan Gregg. He accepted the challenge. He spoke as openly as Weir Mitchell had done; and he spoke to a receptive audience. Much of the betterments he then urged have been realized.

One of his latest contributions—and this within the past year—was his sponsorship and vigorous support of the Bill which was passed in Congress establishing the National Library of Medicine in a new building to be erected in Washington, thus ensuring suitable housing for this great library, formerly the Library of the Surgeon-General, and provided for its proper operation and expansion.

In November 1956 Dr. Gregg received a

special Lasker Award from the American Public Health Association, honoring him as "exemplar *par excellence* of the well-being of mankind throughout the world, public health statesman, influential medical educator, wise counsellor and friend."

And at its recent Convocation (1957)

Western Reserve University conferred upon Dr. Gregg the degree of Doctor of Science with the citation: "a wise counsellor with purity of motive, he encouraged and stimulated those who turned to him for wisdom, detachment and broadened perspective."

C. B. F.

KNOWLEDGE AND WISDOM

Knowledge and wisdom, far from being one,
Have ofttimes no connection. Knowledge dwells
In heads replete with thoughts of other men;
Wisdom in minds attentive to their own.
Knowledge, a rude unprofitable mass,
The mere materials with which wisdom guilds,
Till smooth'd and squared, and fitter to its place,
Does but encumber whom it seems to enrich.
Knowledge is proud that he has learned so much;
Wisdom is humble that he knows no more.

—WILLIAM COWPER

FELLOWSHIP LECTURE

EUGEN BLEULER AND PRESENT-DAY PSYCHIATRY¹GREGORY ZILBOORG, M.D.²

Observing anniversaries of births or deaths serves not only the conscious purpose of attesting our respect for those whom we value and love. It also serves the purpose of establishing the continuity between us and those who are no longer with us, and of asserting a kind of almost personal claim on the contributions which never were ours but of which we would like to consider ourselves legitimate heirs and therefore legitimate possessors. This claim is not always justified, but such is the way of men. We are apt to cling together more by solemnizing our past than by cultivating true ties with the present.

This circumstance makes the task of the historian not very grateful and a little uncertain. As a contemporary he cannot help but find himself one of the chorus singing praises, yet as a historian he must step back as it were, knit his brows or half close his eyes in order to see a little further, to establish a perspective, and to reconstruct a relationship between events and men which would to some extent at least reveal the inner dynamics of the course of events which we call history. While it is almost always true that history repeats itself, it is important that the historian not become a repetitious valedictorian of the reconstructed past.

The historian therefore cannot, at any rate he ought not to, overlook certain manifestations of history which may not be entirely consonant with the traditional tone of praise. After all, anniversaries and particularly centenaries of birth are not an appeal for funeral orations; they are stern even though solemn calls for appraisal of our own historical vision, which if expressed with charity for all must however not overlook the sunspots no matter how blinding the light of the sun itself.

It is because of these considerations that one must recall that in 1956, when the celebration of the centenary of Freud's birth took place, The American Psychiatric Association, cooperating in full measure with the American Psychoanalytic Association, represented a rather singular picture of Freudian exclusiveness so to speak. The centenary of Freud was duly observed as it should have been. Here and there stray objections were heard to many things Freud partly did and mostly did not say, but the celebration was dynamic and almost overwhelming. The name of Emil Kraepelin was hardly, if at all, mentioned—as if Kraepelin belonged to another era, long dead and buried. Yet, only a few months before, the hundredth anniversary of the birth of Kraepelin had been celebrated in Munich. Kraepelin was only three months older than Freud, which hardly makes him a man of a generation before Freud. Yet the apparent relegation of Kraepelin to an older generation and of Freud to a newer one has become a sort of tradition in psychiatry, particularly in American psychiatry. One wonders why. Kraepelin became professor of psychiatry at the University of Dorpat (in 1886) in the same year that Freud entered private practice. Yet while more advanced in his academic position, Kraepelin's true and original productivity began in 1896 when he formulated his concept of *Dementia Praecox*, whereas Freud's first contribution to psychopathology, "On the Psychological Mechanisms of Hysteria (preliminary communication)," appeared three years before, which would make Freud a sort of scientific elder of Kraepelin. Freud could also be considered the scientific elder of Eugen Bleuler, who was eleven months younger and whose *magnum opus* did not appear till 1911—the second volume of Aschaffenburg's *Handbuch* entitled "Dementia Praecox—*Die Gruppe der Schizophrenien*."

It is obvious that the three great men

¹ Delivered at the 113th annual meeting of The American Psychiatric Association, Chicago, Ill., May 13-17, 1957.

² Address: 33 East 70th St., New York 21, N. Y.

whose names come to everyone's mind whenever modern psychiatry is being discussed were actually contemporaries, and it requires some historical and psychological analysis in order to understand why one of them is considered "old" and another "new," and why the one in the middle (I have in mind Bleuler), while known all over the world for having introduced the new term "schizophrenia," remains a comparatively obscure figure, as does also his actual concept of **schizophrenia**. As a matter of fact the United States, so quick to respond to and to utilize anything new, waited over thirty years before Bleuler's volume on the schizophrenias was translated into English. Yet Bleuler was a sufficiently well established psychiatric personage to be one of those who upon the invitation of Adolf Meyer came to America to participate in the exercises opening the Phipps Clinic in Baltimore. It was there that he offered American psychiatrists his paper on Autistic Thinking.

It would be rather a platitudinous thing to say that Freud's revolution in the field of psychopathology was the greatest known to us since the sixteenth century. It would be rather superficial to observe that Freud's greatness was responsible for the crowding out of our otherwise rather fresh memories of Kraepelin and Bleuler. Revolutionary and great as Freud unquestionably was, it is somewhat puzzling to observe that Freud, who disliked America so thoroughly and so openly, seemingly eclipsed Kraepelin who was known to many in the United States personally and sympathetically, and at least overshadowed Bleuler who was known to many Americans and who sent his son, now his successor to the chair of psychiatry in Zürich, to an American mental hospital for postgraduate studies. Moreover, Freud's own contributions to clinical psychiatry were secondary if not indirect or minor. For many years Freud admonished his followers to be satisfied with the treatment of neuroses and to keep away from psychoses. Clinical psychiatry was not Freud's forte.

It would seem therefore that the overemphasis on Freud, to the point of apparently neglecting the memories of Kraepelin and Bleuler, must have been due to circumstances not directly connected with clinical psychi-

atry itself. Apparently the cataclysmic changes brought upon the world by Russia and the subsequent World War II were in no small degree responsible for the paradoxical turn of some of the external trends of American psychiatry. The great centers of psychoanalytic, Freudian teaching in Berlin, Vienna and Budapest were annihilated; the British Freudian center, despite the physical presence of both Freud himself for a while and Anna Freud, was temporarily stunted by the blitz over London. A displacement of psychoanalytic forces occurred like an elemental rolling of intellectual and scientific waves. Many if not the majority of Freud's co-workers old and young reached the shores of the United States, and as a result America became the largest and strongest center of Freudian psychoanalysis.

To deny that this resulted in a great contribution to American psychopathology would be foolish and ungrateful, but to overlook some of the negative aspects would be just as foolish. Already in the early twenties Eugen Bleuler was moved to state that unlike the earlier work of psychoanalysts the later psychoanalytic writings were based more on theory than on clinical observations. This particular aspect of psychoanalysis became more pronounced than was good for clinical psychiatry. At the turn of the century August Hoch, the successor of Adolf Meyer in the New York Psychiatric Institute, John T. McCurdy and others sought to utilize psychoanalysis in the service of clinical psychiatry. It is to be noted that not only were these beginnings of American psychoanalytic psychiatry not mentioned in the course of the Freud centenary celebration but, were it not for the solitary voice of Karl Menninger, the name of Brill, to whose efforts we owe the formation of the section of psychoanalysis in The American Psychiatric Association, would not have been even mentioned, as would not the name of William A. White, the president of The American Psychiatric Association who was the first to put the name of Freud in a presidential address.

Perhaps it is just as well that the centenary of Freud's birth was so celebrated, since it thus helped to remind us of those whom we had forgotten in that singular

into the ideational and affective content of his patients. "In the place of neuroanatomy came the actual *meeting* of the patient's personality, and instead of the microscope (the chief instrument) came human speech."⁶ This is as far as I know the first approach in clinical psychiatry which one may rightly call by the modern term "existentialist."

It is ever more and more fascinating to discover how history always finds its man. The Hippocratic tradition in psychiatry is unthinkable without its being followed by the school teacher, by the methodical professor, by the bookman and laboratory compiler—a Kraepelin. It is impossible to imagine the discovery and the unmasking of the unconscious without imagining a restless, almost solitary mind plumbing the depths instead of mapping out the great open spaces, a mind both bold and secluded, perseverant rather than elastic, a single-minded mind whose concern is more his own idea than the mystery that is man. Freud—the anxious intellectual, the intolerant libertarian—was this kind of mind.

It is difficult to imagine an existential approach to man in sickness and in health without imagining a simple man who cares more about what you say and feel than what you might be or what your liver would look like under an oil immersion lens; a man who likes people and who likes to live with people; who wants to speak and hear the language of simple folk and watch them and observe them plainly, simply, without flight into a fantasy of improvised imagery and without reading into a fellow human being that which he is not. It requires a modesty of spirit and humility before that which is living. Eugen Bleuler was this kind of man and this kind of mind. Academic distinctions, which came so easily to Kraepelin and to which Freud so fervently and anxiously aspired, meant rather little to Bleuler. He lived with and for his patients, some 850 of them while he was in Rheinau; these patients as well as the attendants called him Father—although he was only 29 when he joined them as the head of the hospital, and only 41 when he was called to Burghölzli to succeed August Forel and become professor of psychiatry in the University of

Zürich. He responded to this call primarily because he wanted to be closer to his parents who began to show signs of aging, closer to the place where he was born, the village of Zollikon in the canton of Zürich. There he came to work and to teach, there he stayed after he was pensioned, and there he died in 1939 at the age of 83.

Bleuler was a close friend of Kraepelin, and he was in correspondence with Freud till two years before their respective deaths. It is not that Bleuler occupied some "middle ground" position between Kraepelin and Freud—his was rather a simple, human position. Freud once remarked with characteristic asperity that Bleuler introduced the term "ambivalence" as if implying that it was Bleuler's own ambivalence toward psychoanalysis that led him to the creation of the term. It would perhaps be more correct to say that Bleuler thus anticipated Freud's discoveries of the various polarities in the psychological structure of man.

Bleuler was as direct and matter-of-fact as the simple people of his native village, and he neither minced words nor engaged in polemical rhetoric. One of the many examples: "A critic," writes Bleuler, "says that in the beginning I was formally devoted to the old theories of Freud, but that then I dropped some of them. He is mistaken."

It would be rather a lengthy task and, since the English text of "The Group of Schizophrenias" has now been published, it would be rather repetitious to try to recapitulate Bleuler's views on schizophrenia. Even though he is best known for his description of schizophrenia, Bleuler's place in the history of psychiatry is due pre-eminently to his fundamental, existentialist orientation which is also reflected in his formulation of schizophrenia. The term "existentialist" as used here ought to be understood in its direct and simple meaning. It has little to do with the existentialist philosophy of Jean Paul Sartre, which is essentially nihilistic, or that of Heidegger, which is more confusing than profound but essentially non-psychological, or the too abstract, even though more psychological, ex-

⁶ *Idem.*

⁶ Das Autistisch-Undisziplinierte Denken in der Medizin und Seine Überwindung. 4th ed. Berlin 1927.

ism of Karl Jaspers. Bleuler's approach was strictly observational and he avoided being involved in any philosophizing. He looked for the solution of the riddle of that which is psychological and he seems to have been inclined more toward a positivistic point of view, yet without losing contact with the actual human being. It is worthwhile recording that the psychological, the psychic, "the psychoid" as he called it, intrigued him to the very last moment. On his death-bed he was busy putting together various notes he had made for the preparation of a book to be entitled "The Soul of Plants." He lay there slowly writing till the pencil dropped out of his weakened hand as he passed away.

One is justified in saying that he was a lifelong seeker after the truth, particularly the truth about man. He was not a fanatic of any special theory, or a devotee of some favorite set of concepts, nor was he an eclectic. In his quiet way he took life and people and events as they came. This does not mean of course that he was a cold, dispassionate empiricist. He was a teetotaler, for an instance, and a passionate one. His heart would not rest as long as Switzerland showed the highest rate of alcoholism in Europe, if not in the world. Directly connected with his fervent loyalty to human beings was his devotion to the Swiss dialect. At first one might mistake this for a kind of exaggerated patriotism, but it was not this. In order to live and understand people you must speak their language, not in this case the language of the cultivated, intellectual, "high" German but the simple dialect of the peasant, the little man of his canton of Zürich.

It was this simplicity and directness of the little man, whether worker or peasant, that Bleuler loved. Bleuler himself was of this simplicity and lived by it. This is apparently one of the reasons why he was so opposed to that thinking in medicine and psychiatry which he called "autistic thinking"—a form of thinking more related to spontaneous, wish-fulfilment ideation than rational, realistic thinking. In 1919 Bleuler devoted a book to this subject, and he entitled it "The Autistic-Undisciplined Thinking in Medicine." It went through four edi-

tions, the last one appearing in 1927. The book is a keen and sharp indictment of the medical profession for its wish-fulfilment, unscientific thinking, a type of thinking which perverts the very art of healing and the very spirit of medicine. Bleuler shows here that he is a master of direct language which is both clear and bold. Thus in discussing the question of degeneration, which was introduced by the French psychiatrist Morel, Bleuler says:

When we read: the patient on the mother's side comes from a very old family, on the father's side from a younger one—well, I understand quite well what the writer wants to say about the characteristics of the old aristocratic family and the upcoming family of the father's side, but the whole conception is false.⁷

With similar directness he speaks in a footnote added in 1927.

It would be quite timely finally to stop the battle as to whether schizophrenia is a disease entity or a "real" disease. If the idea is really not clear yet, then one might at most discuss to what extent and in which sense the concept [of schizophrenia] unites certain things that belong together, and then one could consider whether this type of unity serves the purpose of our conception or whether it is useful. The concept "fish" designates a unity; that of "mammal" does the same. The concept "whale" is also a unit, but of a different order. There was a time when the whale was considered to be a fish. If now we were to consider animals from the standpoint of their method of locomotion, the whale would become a fish all over again.⁸

This is the language of a man who does not set high store in purely conceptual thinking. To Bleuler, concept apparently must be an expression and serve the needs of reality.

This word "reality" may be easily misunderstood here. During the last thirty years it has been used both as a philosophical and a psychological term, and at times to the detriment of clarity both in philosophy and psychology. Unfortunately, the word "reality" has no synonym in the English language. It has been in use for over four hundred years, and we do not possess in our language a single word that would be the proper equivalent of the German term which Bleuler used, namely: *Wirklichkeit*, which means not so much "reality" in the broad sense of the term as "real existence." It is

⁷ *Ibid.*, f.n. p. 61.

⁸ *Ibid.*, f.n. pp. 59-60.

the relation of the individual to his own existence and to the existence of other people and things that in the view of Bleuler mattered in the life of man.

That is why Bleuler's vision was focused not on the mental illness called *Dementia Praecox*, an illness which was supposed to have its own course and its own outcome, as if it were something having its own existence within a given individual who happened to be the victim of it or affected by it. Bleuler was primarily interested in the manner in which the schizophrenic *lived* his own life in relation to what is designated as *Wirklichkeit*.

It was therefore important to Bleuler to bring together all those psychopathological manifestations which showed a certain discrepancy between the various functions of the personality, a certain discrepancy between the affect and the content of thought, a certain discrepancy between the word and the deed, a certain discrepancy between thought and actuality. It is these discrepancies that led Bleuler to invent the term "schizophrenia," the splitting of those psychological functions of man which are usually integrated into one whole. Hence, Bleuler's concepts of ambivalence, affectivity, autistic thinking, dereistic thinking and syntony which gained general recognition and usage. Hence, too, Bleuler's assertion as early as 1907 (although it was not published until 1911) that

if a given patient wants to stand on his head, or to break windows, or to tear his clothes, etc.—all this is not a result of the process of illness (*Krankheitsprozess*) but a reaction (I mean a psychological reaction) to inner and outer experiences (psychological).⁹

It is remarkable to what extent Bleuler remained inwardly true to his respect for the unitary quality, for the indivisibility of the human person. In this respect he stands in intimate relationship to Freud, whose greatest contribution to the knowledge of man was just this; from the scientific, and not only from the philosophical and spiritual, point of view, man is one in health and in illness even when he manifests himself to us as "split," as schizophrenic.

It is impossible to say whether the priority

in this respect belongs to Freud or Bleuler; it is most probable that both were moving in the same direction, and it would seem that both were drawn toward one another by the discovery of the richness and awesome power of the unconscious. Despite external appearances to the contrary, I am inclined to believe that Freud had more Bleuler in mind than his assistant Carl Jung, when he said that most of his followers and collaborators came to him via Zürich. Abraham, Brill, Jones and many others were exposed for various lengths of time to the influence of Eugen Bleuler in Burghölzli. Bleuler was one of the first contributors and coeditors of the *Jahrbuch für Psychoanalytische und Psychopathologische Forschungen*.

To Bleuler, schizophrenia was a complex gathering of psychological reactions. Here we come upon one of the most striking paradoxes in psychiatric clinical thinking. He stated without ambiguity that "At present, the only therapy of schizophrenia to be taken seriously is the psychological therapy."¹⁰

Yet Bleuler believed that after all is said and done schizophrenia was an organic disease. Freud, as is known, in a similar way stressed the psychological aspects of mental illness, but hoped that some day some physico-chemical agents responsible for the illness would be found. On the other hand Adolf Meyer, more strictly of the biological bent of mind, thought schizophrenia to be of psychological origin. This point was one of the most important in the scientific dissension between Eugen Bleuler and Adolf Meyer. However, Bleuler gravitated toward the psychological without separating it from the organic. He even wrote a little book on "The Psychoid as the Principle of Organic Development." It was published (in German) in 1925.

Bleuler seemed to be closer to vitalism and to Lamarck than he himself appeared to know. As a result he is one of those who, like Freud, was inclined to avoid drawing a clear line of demarcation between the normal and the pathological in the psychological functioning of man. He was more interested in what the given person did than with what kind of illness he was possessed of. That is why he was opposed to the idea

⁹ M. Bleuler. *Op. cit.*, p. 113.

¹⁰ *Idem*.

that a mere diagnosis of schizophrenia is sufficient to relieve one of criminal responsibility. He specifically stated that it is the lack of freedom of the will in a given case, and not the diagnosis of a given "disease," that should be considered the main factor whenever the problem of responsibility arises.²¹ Traditional as this point of view might appear at first, Bleuler was in actuality rather consistent. He would not bow to mere labels, even diagnostic ones; he bowed only to human facts.

Another outcome of this abolition of the strict line of demarcation between the mentally healthy and the mentally sick was the utilization of various psychological reactions in the analysis of our social life. In this respect Bleuler, like Freud, saw the same psychological mechanisms operating in our normal social life as in the pathological life of an individual. However, there was this difference between Freud and Bleuler. Freud, as is known, equated the social organism with that of the individual, and he saw the same pathology in society as in a person. Bleuler on the other hand avoided this methodological error; he did not consider the given psychological mechanism pathological in itself, but only the ethico-sociological consequences of certain psychological trends. In other words, Bleuler remained consistently opposed to reliance on diagnostic labels, not only in clinical or forensic psychiatry but also in social psychology.

This, I believe, is one of Bleuler's greatest merits, and one of his most valuable contributions. Thus he was able to rise to great heights of moral and scientific evaluation of human behavior. As a physician he knew the sick man as few psychiatrists of his day, and perhaps of ours, did. He took his post in Rheinau—a lonely spot on the Rhine in a place that as late as 1867 was still a Benedictine monastery removed from the worldly world. There the young Bleuler started being a psychiatrist. At that time this meant that he actually had to lay aside, for most of the time, the microscope and the neuroanatomic preparations which he had learned to use so well at Gudden's laboratory in Munich, because he had to become

caretaker, housekeeper, surgeon, dermatologist, internist and most of all the gentle friend of 850 patients. Epidemics would flare up; then to his many roles and preoccupations would be added those of a public health officer. This is how one learned psychiatry in those days. The manner and the method of such learning, the hard and yet the fullest way, is reminiscent of those which were imposed by necessity upon the physicians of the institutions and retreats in the days of Philippe Pinel, and some half-century later upon the founders of The American Psychiatric Association.

Young Bleuler, not yet thirty, quickly started taking into account the failures, errors and weaknesses of his day. He jotted down his many experiences and heartaches so that some thirty years later, already a mature and seasoned psychiatrist and a professor at the University of Zürich who had seen the world (he had at that time already visited America for the first time), he wrote what might be called his brief against the medical world of his day. *Das Autistisch-Undisziplinierte Denken in der Medizin und Seine Überwindung*.

In quality of thought and intensity of feeling, this book surpasses many of his other works, not excluding perhaps his "Group of Schizophrenias." It was a straightforward restatement of what he meant by autistic thinking in our daily, non-psychotic life, and a severe indictment of our professional propensities. He did not overlook the positive aspects of medicine, but, as he said in the preface to the first edition of the book in 1919, "Here it is necessary to bring out the mistakes [of medicine]. With all that is good in medicine, this work cannot busy itself." One at once notes the tone of a pamphleteer, yet a special type of pamphleteer, an objective, impersonal one. He attacks no one by name or place; he is aggressive without being bitter and sharp, without being angry and devastating, without being really harsh. Many of the examples given in this book, many an aspect of medicine of some four decades ago, would appear to us already superannuated; science and medicine have moved fast since 1919. Yet the substance of the book is still as fresh and alive today as it was when it first

²¹ E. Bleuler. *Das Autistisch etc.* 4th ed., p. 56 f.n.

appeared, perhaps even more alive because we know now so much more and therefore ought to know and do better.

Bleuler points out to what extent the medical profession is given to autistic thinking in its medical practice as well as in its theoretical elaborations. It is accustomed to that type of thinking which pays no attention to the dividing lines between human experiences and the verification of these experiences by looking at the actualities (*die Wirklichkeit*), and which gives up logical self criticism. That is to say, it is the type of thinking which is analogous and in some respects quite identical with the thinking we find in dreams, and in the autistic thinking of the schizophrenic who bothers as little as possible about actualities, and who thus fulfills his wishes in a state of megalomania or in persecutory trends, which is a result of his projection of his own incapacities into the outside world. It is this type of thinking that was named autistic; it is ruled by its own independent laws which depart from our realistic logic; this thinking does not seek for truth; it is preoccupied with wish-fulfillments. Accidental association of ideas, and most of all inner affective demands, take in many respects the place of realistic logic. They prevent the individual from deriving his associations from actual experience and following strict realistic logic.

Bleuler cites time and again the propensity of the medical man to believe what he wants to believe, to be motivated by economic success and therapeutic do-it-quickly methods. It is a kind of autistic empiricism in medicine that Bleuler attacks, which he calls "wearing the therapeutic necktie which happens to be the style of the moment."

While reading over the galley proofs of his book Bleuler came upon the fact that four or five years before him a booklet had appeared (already then in the fourth edition) written by someone named Bouget and called "*Quelques erreurs et tromperies dans la science medicale moderne*," and in a footnote to his text Bleuler called the reader's attention to this booklet; he remained impersonal and sought no priority rights.

Bleuler had no patience with this type of thinking in the practice of medicine.

The medical man, Bleuler believed, had no business to be the slave of "the need to feel comfortable on the part of the public"; he stressed the social and ethical demands which the medical man must impose upon himself. Bleuler raised his voice against the too generous and indiscriminate dispensing of various medicaments.

More than two centuries ago, Sydenham made the statement that the arrival of a jack-pudding [buffoon] in a small town might be more beneficial to the health of the inhabitants than the arrival of twenty jackasses laden with drugs. Sydenham was an able man and a great physician. I am deferring to the authority of his name, for I ascribe no value to scientific priorities. Sydenham did not know in his day of our modern drug industry, or he would have spoken of drug factories instead of jackasses.¹²

Bleuler considered certain experiments on rats without proper human controls a manifestation of purely (or impurely) autistic thinking in medicine. The highest form of one's relationship to reality is one's ability to state simply: This I do not know.¹³ "Careless thinking is oligophrenic and leads to error; autistic—to paranoia; our ordinary everyday thinking is a mixture of realistic and autistic trends."

As one of the examples of autistic manners, Bleuler spoke of those who fight Freud's psychology with relentless zeal, and pointed out that this psychology put the whole field of psychopathology on a totally different foundation, and that one finds this great change in the very writings of those who still believe that they have rejected Freud once and for all.¹⁴

Some of our psychiatric household terms Bleuler rejected as autistic mannerisms rather than realistic designations: so many believe that they designate something definitive by the term "psychopath"; in actuality no one has as yet established a proper concept of what a psychopath is. It is a negative designation of a general deviation from the normal. We ought not to look upon any striking characteristic of an individual as

¹² E. Bleuler. *Op. cit.*, 4th ed., p. 18.

¹³ *Op. cit.*, p. 90.

¹⁴ *Op. cit.*, p. 45.

psychopathic. Let us call him a schizophrenic, an hysteric or whatever he is; if we don't do this, then what is left is only the designation "psychopath," which tells us nothing about the nature of the deviation in question.¹⁶

With a striking boldness Bleuler pointed out the instinctive, intuitive psychological knowledge which so many medical quacks possess. Scientific medicine too was until recently in possession of this gift of intuition; unfortunately, the purely mechanical physical and chemical methods which make diagnostic work so much easier have also, however, made us turn away from the psychological.

The habit of making direct psychological observations, in the manner of a spontaneous, natural understanding of man, which even the uneducated possess, has been lost, and we behave as if we ought to defend ourselves against something mystical when we come in touch with the most important aspect of civilized man (the psychological). Psychic mechanisms are too complex for us to be able to reduce them to easily understandable and mechanically applied formulae, like chemical reactions. This is why there is a fear of the psychological in medicine.¹⁶

I may add that essentially this is still true today, despite our apparent acceptance of the psychological in medicine as evidenced by the popularity of the term "psychosomatic medicine." The general distrust of psychopathology on the part of medical men and medical students is I am afraid greater than the increasing popularity of psychiatry and the broadening of the psychiatric curricula in our medical schools would indicate.

Bleuler does seem to be still right today, more than we know. Apparently we have not yet solved the problem. It is not merely a matter of training alone. Perhaps psychiatric education must be more cognizant of the need for humanistic education, without which traditional scientific education as it is understood by positive sciences becomes, as Bleuler pointed out, an impediment in our methodological approach to human problems. The issue of integrating the subject of psychology as a humanistic discipline into the field of human knowledge, without mak-

ing psychology the maidservant and mimic of physics and chemistry, has been raised time and again throughout the history of scientific thought; Bleuler too brought it into focus. It is this issue that remains unresolved in our present-day, post-World War American psychiatry.

As I said before, the approach which might be termed "humanistic existentialism" offers some hope, and some of the European psychiatrists are now testing it successfully both in psychotherapy and psychopathology as a theory. The name of Ludwig Binswanger in Switzerland, an offshoot of the Bleuler tradition, comes to mind in this connection.

But this aspect of the solution raises a number of new problems which were not envisaged by Bleuler. It is highly important, for instance, to avoid slipping into a sterile personalism under the guise of individualism in psychopathology. It is also highly important to learn, and we still have a lot to learn in this respect, how to talk to each other without falling into the confusion of autistic conceptualism under the cover of a terminological screen.

This problem stood before us long before Bleuler in all its acuity and urgency. Said John Henry Newman almost a full half-century before Bleuler:

No power of words in a lecturer would be sufficient to make psychology easy to his hearers; if they are to profit by him, they must throw their minds into the matters in discussion, must accompany his treatment of them with an active, personal concurrence, and interpret for themselves, as he proceeds, the dim suggestions and adumbrations of objects, which he has a right to presuppose, while he uses them, as images existing in their apprehension as well as in his own.¹⁷

There is more than an appeal for semantic clarification in these rather contemplative, mid-Victorian words. It is the same appeal as Bleuler made when he insisted on direct human observations, through instinctive (intuitive) contact with your fellow men; I could call it an appeal for truly existential cooperation, taking all the time into account the living individual before you.

In this respect it is more than a coinci-

¹⁶ *Op. cit.*, p. 64.

¹⁶ *Op. cit.*, p. 18.

¹⁷ *Grammar of Assent*. Image Book. 1955, p. 37.

dence that the atheistic friend of Bleuler, Sigmund Freud, called the highest achievement of normalcy work and love, and that the scientific, observational empiricist Bleuler considered work-therapy (*Arbeitstherapie*) as the cornerstone of treatment. Here again I must point out that the term "occupational therapy" used by the English-speaking psychiatrist does not convey exactly the meaning that Bleuler had in mind. The words "occupational therapy" might connote a form of diversion, a form of "getting away from one's self" as the expression goes, while work-therapy as Bleuler described it in his book on schizophrenias meant to him explicitly the awakening of the autistic person to true productive creativeness, to overcoming his autistic proclivities.

It is this concern with the person in man that makes Bleuler stand out as one of the truest representatives of humanism in clinical psychiatry. To put it again in the words of Newman, purely formalistic considerations make man "attenuated into an aspect

or relegated to his place in a classification." Bleuler had no stomach for such attenuation. Therefore he stated: "I feel ever so much obliged to pay attention to the interests of the community and to follow the order of the State—without however ever losing sight of the individual." In the light of this careful avoidance of the sorry business of "attenuation" of the human individual, it is fitting to observe that as a result of many years of hard work in a mental hospital and hard thinking about man in sickness and in health, Bleuler came to the conclusion that "the special task of the educational influence of a mental institution is the habituation of the patient to be *free*" (*italics mine*).¹⁸

Thus the neutralistic Swiss in Bleuler ever strove to preserve the individual in man and, what is most important, his freedom—a freedom which neither state nor institution might impede. To Eugen Bleuler illness, the great constrictor of human freedom, should be treated in the service of true inner and outer freedom.

¹⁸ M. Bleuler. *Op. cit.*, p. 114.

RESPONSE TO FELLOWSHIP LECTURE ON EUGEN BLEULER

E. E. KRAFF, M.D.¹

In the brilliant and wise lecture with which Gregory Zilboorg has commemorated the one-hundredth anniversary of Eugen Bleuler he has rightly compared the great Swiss psychiatrist with the two outstanding men whose centenaries the psychiatric world celebrated in 1956: Emil Kraepelin and Sigmund Freud. He has also reminded us that Bleuler was in a way standing between Kraepelin and Freud, adhering in fact to Kraepelin's nosology and Freud's psychopathology at the same time.

I am afraid that in the minds of some the second proposition risks invalidating the first. "Between Kraepelin and Freud" . . . does that not sound like lukewarm eclecticism? And do eclectics—even the most distinguished amongst them—ever rank together with what Schopenhauer called the "*originaldenker*," the original thinkers? It would not be difficult to enlarge upon this argument. No doubt: it was Bleuler who coined the term "schizophrenia"; but was it not Kraepelin who laid the clinical foundations, and did not Bleuler himself recognize the fact in calling his famous monograph *Dementia praecox or the Group of Schizophrenias*? It is true: the terms "ambivalence" and "complex" were first used in the Burghölzli; but could they have been found if Freud had not seen the corresponding phenomena first? (One might even use Bleuler's own words (in the preface of the monograph) that "the whole idea of dementia praecox originates with Kraepelin" and that in respect of Freud's ideas he was only responsible for their "application" to schizophrenia.)

Let me answer the sceptics right away and tell them that Bleuler's genius lay in the field of "Ethos" rather than in that of "Logos." He could "stand between Kraepelin and Freud" and still remain original because he approached the problems of man not so much

with intellectual curiosity as with a feeling of human fellowship. As he observed his patients not as specimens to be dissected and filed but as persons to be respected and helped he had an immediate understanding for them which allowed him to give to the realities which Kraepelin and Freud had painted something like an additional dimension.

Of course, neither Kraepelin nor Freud were coldly curious or lacked all feelings of human fellowship; but it is hardly unjust to say that both were more scientists than physicians. Kraepelin, for instance, wanted to devote his life to experimental psychology and became a psychiatrist only because he had to earn a living. He always considered his psychological experiments his most valuable contributions to human knowledge, and as to his interest in therapy I can bear testimony that it was completely negligible. As to Freud, he admitted that he had "never really been a doctor in the proper sense," but he became one "through being compelled to deviate" from his original purpose (of becoming a physiologist). He regretted that his restricted material circumstances prevented him from taking up a theoretical career, and Ernest Jones recalls in his biography that Freud expressed "as far back as in 1910 . . . the wish with a sigh that he could retire from medical practice."

It is noteworthy that Bleuler's attitude was quite the reverse. When at the age of 29 he was appointed Superintendent of the Asylum of Rheinau he concentrated from the very beginning on plain doctoring, and so enthusiastically did he devote himself to this task that he went far beyond psychiatry into the field of general practice, attending not only the medical needs of his patients but also those of his personnel and of the villagers of Rheinau and going in this endeavour as far as actually arranging for a weekly operating session at which he performed quite alone even major operations. He became in fact a family doctor not only

¹ Address: 16, Parc Château Banquet, Geneva, Switzerland.

in the usual sense of the word, but also in being a father-image for everybody around him, patients as well as nurses and attendants. He ate with his flock, he worked with them, he arranged their parties, he shared in their amateur theatricals, sometimes he even administered their savings accounts, and so completely did he identify himself with his activity in the field of what today we would call social psychiatry that he was in the middle of planning the transformation of the village of Rheinau into a psychiatric colony of the Gheel type when the Zurich Government surprised him in 1898 with his appointment as Professor of Psychiatry and Director of the Burghölzli.

For the European scientist there is no greater satisfaction than obtaining "the Chair." Kraepelin did not really come into his own until he had been appointed Professor in Dorpat, and Freud resented it bitterly that the antisemitism of the Austrian authorities made it impossible for him to become a full professor. For Bleuler it was apparently a sacrifice to accept the professorial gown. This is at least the opinion of his son who, in response to a question of mine, told me recently: "After his moving into the Burghölzli . . . the possibility of fully giving himself to the life of his patients did not exist any more. All through his life he felt this painfully, and I believe that since I have known him there was always a certain resignation in his attitude towards the patients. He would have liked to come as close to them as before but it was not possible any more."

Of course, this does not mean that Bleuler actively disliked his professorial job. Somebody who abhors teaching cannot write a text book of so high a quality as his. Possibly at the beginning he was not a very brilliant professor. If one hears that in his first years in Zurich he sometimes based his lecture on a few pages torn out of a current manual one cannot be entirely out of sympathy with the Faculty of Medicine which had opposed his appointment. Later on his teaching performance was certainly more than adequate, and we have every reason to believe that he was quite happy with having the possibility of helping his students in their quest for knowledge. It is probable, how-

ever, that he never ceased to consider it more important to help his patients in recovering their health. We know after all that when, as a high school student, he decided to become a psychiatrist, he did so because he was aware that the peasant population of his canton (to which his own family belonged) was not too happy with its mental patients being in the hands of men who like Griesinger, Hitzig and Gudden, were not familiar with the "Züri-Tütsch" and because he wanted to satisfy the desire of his people to have not only erudite savants but also a real doctor. We have, moreover, the conclusive evidence of Bleuler's research orientation, the development of which can only be understood if one takes into account that as Ludwig Binswanger puts it: "The primacy of his life was practical reason" in Kant's sense.

Bleuler's fame is essentially based on his work on schizophrenia, and his most important contribution in this field was undoubtedly the profound analysis of the dynamic psychopathology of the schizophrenics. But originally the scientific interests of Bleuler had been very far removed from psychology proper. Apart from a few studies on the biology of the criminal in Lombroso's sense nearly all the papers he published in the first twenty-five years of his professional life were on neurophysiological, neurological and neuropathological subjects, and it would have been difficult to guess at that time that this young organicist was destined to become one of the most outstanding medical psychologists of his generation.

In my opinion it is quite evident how the change in Bleuler's research orientation came to pass. In the decisive years of his scientific evolution, in Rheinau, the vast majority of his patients were schizophrenics. His medical Ethos obliged him to make every possible effort to cure them. And in this connection he discovered not only that (using now his own words) "except for the treatment of purely psychogenic disorders, the therapy of schizophrenia is one of the most rewarding for the physician," but also that "at the present time, the only type of therapy that can seriously be considered for schizophrenia as a whole is the psychic method."

Since then we have of course learned seri-

ously to consider somatic methods too. There is no doubt that Bleuler, if he were alive today, would very much approve of this. The last time he participated in the discussions of the Swiss Society of Psychiatry he commented in fact on the chances of bodily therapy and said that in respect of the "cardinal question of finding the point where one could attack" he could only hope that the younger generation would be more fortunate than his own. But the unquestionable advances made in the field of somatic treatment have by no means diminished the need for a reasonable employment of the "psychic method." Insofar as they help the patients to regain a better contact with the outside world they have even increased it. Moreover, clinical experience teaches us that schizophrenics respond in a favourable way to the very fact of being cared for, and in making use of this reaction we are certainly very close to the "psychic method" Bleuler was employing.

Bleuler was indeed very far from recommending the psychotherapy of schizophrenia as we understand it today. He was convinced that "the symptomatology of the disease is dominated by the complexes," but he did not see how it could be influenced from that angle in a systematic way. "The only way," he said, "is to offer chance itself a great many opportunities so that it may seize one of them. If this is done at the right moment, a good deal can often be accomplished." Thus it has to be understood that he saw the most important aspect of occupational therapy in that it "offers the attendant personnel almost the only opportunity for close contact with the patients." In other words: his goal in occupational therapy was not to keep the patient busy, but to get near him and to give him the warming feeling of being cared for. Nothing is more typical of his approach than the little story he himself tells in his monograph: "In one of the hospitals I encountered a violent woman patient who was regarded as so dangerous that not less than four attendants at a time were permitted in her room. On Christmas Eve I took this patient along to the party at the hospital. On New Year's Eve she introduced herself as a singer; some weeks later she was released." But perhaps I should also report a story

which I heard from one of his pupils: Walking through the Burghölzli with his assistants, Bleuler was once shown some new material upon which very destructive patients could sleep completely naked. He immediately undressed and lay down on it because, as he said, "I cannot oblige a patient to lie on this stuff if I do not know whether it is adequate for a human being." Clearly, Bleuler's psychotherapeutic practice makes very good sense from the point of view of psychoanalytic theory, but the point I want to stress here is that it was practical far more than pure reason that allowed him to penetrate so deeply into his patients' unconscious.

It would not be difficult to show also in other spheres to what extent Bleuler's existence centered around his ability and his desire to respect, help and understand his fellow beings. I think it is a characteristic reflection of his own genius that amongst his pupils he had outstanding personalities as different from each other as for instance, C. G. Jung and André Repond, Karl Abraham and Eugène Minkowski, Abraham Brill and Ludwig Binswanger, Hans W. Maier and Hermann Rorschach to mention only a few. I cannot resist the temptation to tell in this connection an anecdote which shows very plastically how little authoritarian he was in his relations with his collaborators. When Françoise Minkowska, Eugène Minkowski's brilliant wife, was a young resident at the Burghölzli, she once showed her indomitable temperament by loudly criticizing Bleuler's way of examining foreign students. When Bleuler heard of her comments he called her and asked her to sit in an adjoining room next time he had to examine a foreigner and then to tell him in a concrete way what errors he might have committed. André Repond, whom I recently consulted about Bleuler's attitude in respect of his assistants, called it "very fatherly and full of understanding," and the little story I have just related is certainly very apt to show this aspect of his interpersonal behaviour. It is perhaps even more important, however, that Bleuler was able to act not only as an understanding father, but, if I may say so, also as a helpful older brother. All his pupils

praise, in fact, his preparedness to enter into a scientific discussion on a footing of complete equality even with his youngest residents, and Ludwig Binswanger responded to my query in this respect by calling Bleuler's attitude "democratic in the highest sense." This is a very interesting formulation on which I should like to make a few comments.

Bleuler came from Swiss peasant stock; in other words, he was the true son of a people justly famous for having developed a type of society in which the democratic equality of rights and duties is based on a deep respect for rugged individuality and on a century-old tradition of mutual assistance in case of need. I do not think that it detracts

in any way from our admiring appreciation of Bleuler's greatness if we discover in his genius the principal traits of the genius of his nation. I should say that in my opinion it even increases it just as I believe it heightens the stature of a Lincoln that we can consider him the ideal type of an American. I do not know whether this kind of genius can only grow in a democracy, but I am sure that it is nowhere better understood and better loved. Therefore it seems very fitting to me that Bleuler's centenary should be commemorated precisely in these United States. The American Psychiatric Association ought to be congratulated on its intuition in choosing this subject for this year's Fellowship Lecture.

MURDER BY ADOLESCENTS WITH OBSCURE MOTIVATION

A. WARREN STEARNS, M. D.¹

In the early days of society, treatment of crime was entirely instinctive. This is reflected in such sayings as "An eye for an eye and a tooth for a tooth," "He who sheddeth man's blood, by man shall his blood be shed," and so forth. The motive was revenge, and it depended upon an instinctive reaction. Later on, as man became less savage and more a man, the theory of the deterrent effect of punishment gradually appeared. It postulated that society could be immunized against crime through a fear generated in all hearts that, if they sinned, they would suffer. Still, they sinned. E. B. Wilson has said, "Punishment is no good after you are sick. It may be a good way to condition children."

Latterly, there has developed an interest in trying to do something with individual offenders. This was at first called *correction*, later *reformation*, now *rehabilitation*. During the past century, and more particularly the past half-century, with the development of psychiatry, there has also developed an interest in the makeup of the individual offender. Psychiatrists have dabbled in criminology, but on the whole few serious systematic studies have been made. For the most part, psychiatrists and those working under their direction have tried to classify criminals within the categories set up for the classification of insanity. This attempt has been largely unsuccessful. It has resulted in a much hypertrophied group of personality disorders, which has included so many diverse elements that it is hardly fit to be called a group at all. Originally, its use was confined to those individuals who from early childhood had shown deviations in development and behavior. Latterly, it has been applied to cases where one single act was all that there was to go upon without any attempt at picturing a clinical entity. It has seemed to the writer, after many years of contact with crime and much reflection on the matter, that it ought to be possible to establish clinical syndromes in criminology

comparable to those in medicine, although not in any sense identical. When physicians classified certain types of sickness as fevers, it was quite an advance. It at least brought cases together which ultimately turned out to be infectious. When the group was broken down into measles, scarlet fever, diphtheria, typhoid and so forth, it laid the way to further understanding and, as it turned out, specific treatment.

In the opinion of the writer, if psychiatrists are to seriously undertake a study of criminology, they must first develop some sort of classification. It is too much to hope that this could be developed full-grown, giving the type of diagnosis and treatment now available in medicine, but at least a start can be made. With this in view, a series of cases is presented with the suggestion that they represent a clinical syndrome comparable to some of those in medicine.

It has long been recognized that profound changes take place in the human body during the period of adolescence. It has also been recognized by some, although not admitted by all, that these changes are frequently associated with alterations in behavior. A substantial portion of students have associated these alterations in behavior with changes in body chemistry, although latterly there has been some tendency to attribute them to environmental pressures or deficiencies. It is not my purpose to debate this matter, for the issue is not important in the thesis which I hope to develop. Enough to identify adolescence as a period when extraordinary things may take place: these may be the arousal to great events; the simple revolt from parental or adult control; or suicides without motivation, which I have recently published(1, 2). Murder is comparatively rare at this period. In my previous study, only 2% were under 21 years of age(3).

I wish to describe briefly a group of adolescent murders for which no motivation has been found and which seem to have certain elements in common. These cases further illustrate the value of a categorical arrangement of criminals. I have done what I could

¹ Address: Billerica, Mass.

to conceal the identity of the cases for obvious reasons but have tried not to mutilate the picture too much.

CASE 3428.—This is a 15-year-old boy of excellent reputation. His mother was psychotic, and he lived with relatives. He was a student in junior high school, and there is nothing in his record to indicate that he was anything except a fine specimen. He had been attentive for some little time to a 14 year old girl, a schoolmate. They had been together more or less, had kissed on at least one occasion, but there had been no overt sexual experience. They rode out to a ball game on his bicycle. She was scantily clad and sat facing him on the handlebars. In the early evening they started home. After going a short way, they stopped at a park; she dismounted, he remained astride the bicycle. He drew a pistol from his pocket, a recent acquisition to his collection. His grandfather was interested in guns and occasionally sent him a specimen. He had carried it for some time, and at least on one occasion he had fired it. He showed it to her. She said, "Don't shoot me," whereupon he pulled the trigger 4 times, the bullets passing through her chest, one through the aorta, killing her instantly. He rode away for a while, and then came back to give himself up.

Although every possible theory was exploited, no motive was ever found. He said he didn't know why he did it. It was an impulse. Repeated examination revealed nothing extraordinary about his personality. Dr. Abraham Myerson, who studied him at the time, felt that he was an incipient case of dementia praecox. He and I were employed together and talked over the matter at length. In general, his diagnosis of incipient dementia praecox was based on the supposition that there must be some profound pathological process going on to account for the crime. The boy pleaded guilty to second degree murder and received a life sentence. Upon admission to the prison, he was again thoroughly studied and was considered a model American boy. The only deviation he showed was slight stammering. About 2 years after his admission to the prison, he cut his elbow with a razor blade, leaving a note stating, "This is a suicide. May I be buried beside whom I now join." At the bottom of the note he had left his fingerprints in blood. He was sent to a hospital and in a few days was entirely well. There has been no repetition of this depressed episode. In the last 10 years, he has acquired considerable formal education, developed great talent in art, and is considered to be a healthy, normal young man. A recent review of his case shows an I.Q. of 112. There have been no conduct infractions during his 12 years in prison, and psychiatrists state: "There was no psychiatric process present. Does not appear schizophrenic."

CASE 3811.—This is the case of a 13-year old boy with excellent reputation. It was generally said that he was one of the last persons who would be suspected of doing wrong. He was a newsboy and went to the house to collect for the papers. He re-

ceived the money and started along; then he turned back, why he knew not. He knocked at the door and as the 41-year-old victim came to let him in, he asked for a drink of water. He stepped inside, she turned to get the water, and as she passed it to him, smiling, he hit her on the head with a milk bottle, knocking her to the floor. She was unconscious but apparently not dead. He slipped a laundry bag over her head, pulled up the strings and strangled her. She was clad in white shorts and a halter only. He stuck a knife into her abdomen, saying that he had been told that, if a person was dead, he would not bleed. He also wrapped a towel around her neck. He then ransacked the house taking nothing, returned to a group of boys playing ball, and then went home. No one noticed any change in him whatsoever. Four days later, the victim's daughter coming home found her body on the floor. Persons had seen him go to the house; he was questioned and freely admitted his guilt. He assigned no motive, and no motive was ever discovered. He said an impulse came over him. He pleaded guilty and was sentenced to prison for life. During the 10 years of his prison sentence, he has grown to be a very large man. His conduct has been exemplary. He has studied hard and hopes to get out sometime, although he once told the writer that, if there was any chance of his ever doing that sort of thing again, he would gladly remain in prison the rest of his life.

CASE 4828.—This is an 18 year old, whose family was in comfortable circumstances; he was bright but inattentive in school, so that he did not graduate from high school. He was attending private school where he did little or nothing. He was ardently courting a 17-year-old girl. He had his own car and was something of a traffic problem, but on the whole had an excellent reputation. He had a tear in his raincoat; went to one or two dry cleaners to have it fixed. He then went to a dressmaker whom he had seen once with his mother 2 years before. He knew where she lived, as he had driven his mother there. He asked her to repair the tear in his raincoat. This she did; charged him 50¢; he gave her a dollar bill, and, as she turned, he seized her, strangled her, killing her with his hands. He then went to the sewing room, got some cloth panties and put them around her neck and tied a very tight knot. He next went to the kitchen got a rolling pin and hit her several times on the head. He then got a butcher knife and plunged it into her heart. Then he got a piece of cloth and tied her feet together. He later stated that as he emerged from the apartment, an awful feeling came over him, "What have I done?" He was restless, uncomfortable; went home; could not stay there; went out with some girls, where he repeated the whole event. The girls did not believe it, and he finally told them that it was true and that he was a murderer. Still, they did not believe it. The next day he drove about with a girl and was finally arrested. Here again, no motive was ever determined. He pleaded guilty and received a life sentence.

CASE 4878.—An 18-year-old boy from a good home with an excellent reputation killed a school-

mate. He had failed some courses in high school and was repeating. There is no other suggestion of aberrant conduct. He owned a large bayonet or dagger which he sometimes carried. On the night in question, he went out to walk. He saw his girl friend through a window, returned to his house and got the bayonet. He then went to where the girl friend was babysitting and knocked on the door. When she came to the door, he fell upon her with the bayonet, stabbing her 46 times, thereby killing her. The baby was in a crib nearby, and he stabbed him several times. He was not apprehended for several days. He was a bearer at the girl's funeral, but when accosted made a complete confession. He said he did not know why he did it. The impulse came over him. He had much psychiatric examination, being called *dementia praecox*, psychomotor epilepsy, personality disorder, etc. He was sentenced to death, but this sentence was finally commuted to life by the governor and council. He has shown no evidence of nervous or mental disease since his confinement, and neither has any motive for the crime ever been elucidated.

These 4 cases have certain elements in common, enough I believe to establish a clinical syndrome. The perpetrators have all been adolescent males, their reputations have all been uniformly good, the victims have all been females—two scantily clad, and the crimes have been wanton and ferocious. No motive has ever been established. When such a murder case occurs, I think it fair to assume that the same pattern will be present as in the cases above. It has been assumed quite largely that there has been gross mental disease to account for such crime. It has further been assumed that these persons should be confined for life, that there is indication of some morbid quality which would make it dangerous to ever release them. Having this in mind, I wish to pre-

sent one further case in which the victim did not die, and therefore the perpetrator received a reformatory sentence, was subsequently released on parole, and has shown no evidence of conduct disorder since.

CASE 4955.—This boy was 13 years old and in the 7th grade, having repeated the 4th. He was a non-reader; came from a very disordered family, the father having been once arrested for indecent exposure. He had shown no gross conduct disorder until the present incident. He was building a tree house in the woods near his home. His father would not get him tools, so he went to a hobby shop and stole a knife and a hatchet. The knife was in a sheath which he carried on his belt. While working on the project, he saw a girl his own age go by. He did not know her but walked out to her, and they looked at each other. She said, "I won't bite you." He said, "I won't bite you." He invited her into the woods saying he had a surprise for her. When a little way from the street, he told her to turn around, whereupon he plunged the knife into her back. She fell backward, and he grabbed her, and there were one or two slight cuts on her face and neck. Just what happened then is not entirely clear, but he was arrested and made a complete confession to the police. He is said to have told the police that he wanted to see her breasts.

He was friendly and cooperated with me. The crime appears to be the result of an impulse. We can infer a sexual motive but cannot demonstrate it. He does not show any evidence of psychosis or gross mental disease. His period in the training school was uneventful. School behavior was very good, and he made a good adjustment. He is now in high school.

BIBLIOGRAPHY

1. Stearns, A. W. *J. Maine Med. Assoc.*, 44: 1, Jan. 1953.
2. Stearns, A. W. *J. Maine Med. Assoc.*, Nov. 1955.
3. Stearns, A. W. *Am. J. Psych.*, 4: 4, April 1925.

THE UNLOCKING OF WARDS IN MENTAL HOSPITALS

L. C. HURST, M.B.¹

The problem of eliminating locked doors in all mental hospital wards has been under consideration by psychiatrists in Britain for some years. Dingleton Hospital, Melrose, led the way and has been completely unlocked since 1949. Nottingham City (Mapperly) Hospital followed suit by opening all its wards, as did Warlingham Park Hospital more recently. The latter had only 2 locked wards out of a total of 23 for some 12 years previously, however. Warwick Hospital is also completely open now.

Nevertheless, references in the literature are scanty and the method of opening locked wards has been expounded somewhat vaguely. Little has been done in the way of controlled observation of the results of opening. Bell(1, 11) holds that a satisfactory stage of nurse-patient relationship must be reached as a preliminary to unlocking the wards and that mechanical restraint, seclusion and tube-feeding must be absolutely prohibited. He also lays emphasis upon the education of the public, and exhorts his staff to take a full part in local activities. Koltes(5) maintains that patients must be encouraged to take the attitude that the "hospital is theirs" and that behaviour will then improve and the opening of wards follow as a matter of course. This change of attitude is to be brought about by an intensive group therapy programme, constructive activity in which the patients feel that their work is not exploited and a nonauthoritative role on the part of the staff as regards the patients' everyday life. These ideas are also expounded to the visitor to Warlingham Park Hospital. Rees and Glatt(7) however describe a system of habit-training and occupation employed in a ward of deteriorated patients and report that the use of methods such as these have enabled the wards to be opened at Warlingham Park Hospital. Experience at Mapperly Hospital is in accord with this(10).

The results of ward opening are even more

vaguely defined. Bell(1) says that such a measure leads to "complete lack of tension" in both patients and staff, whereas several locked wards are retained at Netherne Hospital because the staff believe that a closed ward has a sedative value for patients with severe anxiety(5). Bell(1) quotes the case of 3 epileptics with a diminution in the number of fits after opening. He also states that wetting, soiling, destructiveness and refusal of food have almost disappeared, except on the senile wards. Even the increase in the voluntary admissions to Dingleton Hospital in the years after the introduction of open doors (and the establishment of the National Health Service) is cited as an indirect result of opening.

Both Macmillan and Bell(10) agree that the paranoid patient is less inclined to attempt to abscond from an unlocked ward.

It is peculiarly easy in psychiatric practice to conclude that certain procedures produce various changes which happen to have emerged in association with their application. Wittgenstein(8) offers a healthy corrective; "Es können alle Kombinationen der Sachverhalte bestehen, die andern nicht bestehen."

Most of the preparatory requirements for ward opening quoted above rest upon 2 assumptions. First, that well-integrated escapees will provide the principal problem in the opened wards, and second, that the regressed, confused schizophrenic will be amenable to such influences.

In view of this, experience recently gained at Shenley Hospital, near St. Albans, would seem to be relevant. Female Division B comprises 752 beds. Of these, 360 were in locked wards until last year, contained in a block of 6 wards and an insulin shock therapy ward.

Between May and September 1956, 4 of the wards on the block were opened. Neither intensive group therapy nor a programme of occupational therapy on the ward preceded this step. (A small group of 7 psychotics had been having group therapy sessions for several weeks before their wards were opened and weekly sessions involving

¹ Senior House Officer, Shenley Hospital, Hertfordshire, England.

all the patients on the semi-refractory ward have since been instituted.) No changes were made in the method of running the wards prior to their being opened.

As each pair of wards share an airing court, it was necessary to undertake the opening of 2 wards at a time.

The 2 wards first opened were respectively an infirm ward of 50 beds and a ward of 57 beds containing for the most part well-integrated patients, 14 of whom worked in the hospital utility departments. These wards and their airing court were opened on May 19, 1956, and raised relatively few problems subsequently.

Before opening the second pair of wards—a semi-refractory ward of 52 patients and a ward of 55 patients, for the most part degraded and including 25 epileptics—14 patients had to be transferred to the remaining locked wards. Of these no less than 12 were deteriorated schizophrenics of under 60 years of age. There was one case of senile dementia and one blind mental defective. The semi-refractory ward was opened (via the adjoining open ward) on September 26, 1956, and the other ward (similarly) on the following day. On the 29th the airing court was thrown open.

During the first 4 weeks of unlocked doors, 11 patients had to be brought back to the semi-refractory ward, and 5 to the epileptic ward. (The corresponding figures for the 4 weeks preceding opening were 2 and 3 escapes respectively.)

Of these, no less than 10 were deteriorated schizophrenics under 60 years of age, two were deteriorated schizophrenics over 60 (one was found dead). The remaining 4 were non-deteriorated schizophrenics. Four of these patients were subsequently transferred to the locked wards. All of these latter were deteriorated schizophrenics under 60.

DISCUSSION

Several conclusions have been drawn from this operation which might be of value for those contemplating opening wards.

The first, perhaps surprising, fact emerging is that the well integrated patient presents little problem; the paranoid or manic patient often responds well to ward opening.

Those patients who have been formerly noted as escapees often abscond no more frequently than they did before the opening. Also, the paranoid cases may be much improved in this and other respects by means of chlorpromazine.

Senile dementers provide a problem, but a small one. The principal difficulty occurs with the deteriorated, confused schizophrenic. These patients are often not merely troublesome, but are of some danger to themselves when they wander off an open ward. They do not respond well to group psychotherapy, although they may do so to regular occupational therapy and simple manual tasks under constant supervision (4, 6, 7). Certainly, such a programme provides supervision and tends to diminish the time during which they are wandering aimlessly around the ward garden, and perhaps out of it. There is some evidence that routine occupation does reduce the tendency of this type of patient to abscond (6).

In retrospect it would seem that a programme of occupational therapy for these patients might well have preceded ward opening by some months.

The need for controlled studies of such changes as ward opening is very great. A belief that patients and staff have improved socially may be merely due to projection on the part of the psychiatrist. It is difficult to obtain such controlled studies, as ward opening is inevitably accompanied by the transferring of degraded patients or by other measures such as an occupational programme. These will have an unassessed effect.

Of course, this consideration applies with equal force to the supporters of locked wards. Incarceration is unpleasant—it is society's chief deterrent—and most patients do not emulate the subjects of Honorius in "contemplating their new freedom with surprise and terror" (3). (One disgruntled patient did however remark, the day after her ward had been opened; "They've opened the doors; anyone can get in.") The onus would certainly appear to be on the supporters of locked wards to prove their case.

One thing that does appear possible is that the familiar, deteriorated, confused schizophrenic of the mental hospitals would

never have reached that stage had he spent his hospital life on an open ward. The removal of all contact with the outer world might reasonably be postulated as the principal precipitant of his condition. If this should be the case, the problem presented by these patients would be a temporary one. A reliable wire-mesh fence surrounding the hospital precinct—sufficient merely to deflect aimless wanderers—and a porter at the gate would seem desirable, at all events in the early days of open wards. These conditions prevail at Warlingham Park Hospital, but not at Dingleton Hospital. In both all the wards are unlocked. At Netherne Hospital, where 5 closed wards have been retained, the hospital grounds are open to the surrounding countryside.

SUMMARY

Consideration is given to the problems raised by the unlocking of the chronic wards in mental hospitals. The deteriorated schizophrenic, who has spent many years in the hospital, provides most of the difficulties. Attempts to employ this type of patient in small groups of 10 to 18 have produced good results (7, 6) and afford adequate supervision. The need for, and difficulties of, ob-

jective assessment of the effects of ward opening² are emphasised.

BIBLIOGRAPHY

1. Bell, G. M. *Internat. J. Soc. Psychiat.* 1: 42, Summer 1955.
 2. Follin, S. *Ann. Med. psychol., Paris*, 112: 88, 1954.
 3. Gibbon, Edward. *The Decline and Fall of the Roman Empire*.
 4. Jones, Maxwell, Pomryn, B. A., and Skellern, E. *Lancet*, 1: 343, 1956.
 5. Koltes, J. A. *Amer. J. Psychiat.*, 113: 250, Sept. 1956.
 6. May, A. R. *Lancet*, 1: 500, 1956.
 7. Rees, T. P., and Glatt, M. M. *The Practitioner*, 175: 62, July 1955.
 8. Wittgenstein, L. *Logisch-Philosophische Abhandlung*. London: Routledge & Kegan Paul Ltd., 1922.
 9. *The Unlocked Door*. *Lancet*, Nov. 6, 1954.
 10. *Freedom in Mental Hospitals. The End and the Means*. *Lancet*, 2: 964, Nov. 6, 1954.
 11. *Open Doors in Mental Hospitals*. Annual Meeting of the Royal Medico-Psychol. Assoc. Report in *Internat. J. Soc. Psychiat.*, 2: 152, Autumn, 1956.
- ² My gratitude is due to Sisters M. Harney, C. Kennedy, A. McElhill, E. Prenderville, I. Shrimpton and E. Skehan, and also to Staff Nurse M. L. Lamothe and Nurse G. Smith, for their unfailing cooperation and encouragement during the opening of their wards.

A STUDY OF THE EFFECTS OF L.S.D.: PHYSIOLOGIC AND PSYCHOLOGICAL CHANGES AND THEIR INTERRELATIONS

ALBERTO DI MASCIO, M. A., MILTON GREENBLATT, M. D., AND ROBERT W. HYDE, M. D.¹

In a previous experiment at the Boston Psychopathic Hospital it was shown that changes occurred in various parameters of the autonomic nervous system subsequent to the administration of Lysergic Acid Diethylamide in a dose of one gamma per kilo of body weight (1). Utilizing a polygraph as a means of recording the physiological variables, differences in the patterns of physiological reactions of the autonomic nervous system were observed between days in which L.S.D. or a placebo were administered.

The purpose of this study is to utilize this polygraphic procedure of data recording to investigate:

1. The changes in the autonomic nervous system which occur over the course of the day subsequent to the administration of L.S.D.

2. The relationship between the course of these physiological changes and the course of the behavioral and emotional changes.

EXPERIMENTAL METHOD

Apparatus: An eight channel Offner electroencephalograph converted to a polygraph, a recording instrument which allows for continuous and simultaneous recordings, was used. The apparatus was in a room adjoining the sound-proof, temperature-controlled room in which the subjects were placed during recording sessions. A one-way-vision mirror and an audio system allowed for complete observation during recordings. By means of wire leads attached to the subjects the following physiologic parameters were recorded: the EKG as a measure of heart rate, respiration, finger skin temperature, and the muscle tension recordings from the frontalis muscles. In addition systolic and diastolic blood pressure and pupil diameter were recorded.

Subjects: The subjects were 6 male col-

lege students, 24-28 years old and weighing 150-180 pounds, paid volunteers.

Procedure: For each subject there were 2 observation days; one of these days the subject received one gamma of L.S.D. per kilogram of body weight and on the other a placebo was given. The schedule for each day consisted of a series of 5 fifteen-minute recording sessions. The first recording session took place immediately preceding the administration of the drug, with subsequent sessions starting 1½, 2½, 4½, and 7½ hours after the L.S.D. was taken.

During each recording period the subject was comfortably seated, by himself, in the observation room and was connected by wire leads to the polygraph. The subjects were requested to refrain from any excessive movements throughout the sessions. At the end of each session pupil diameter (under standard lighting conditions) and blood pressure were determined.

In the interim between recording sessions the subjects were studied by another group of investigators who observed the social and psychological effects of L.S.D. Their observations on the types and/or intensity of behavioral changes manifested by the subjects, along with the subjective expression of various symptoms and their intensity, were recorded over the course of the day. Control and experimental days were kept as similar as possible.

ANALYSIS OF DATA

A. Physiological Data.—For each subject the following measures, derived from the physiological recordings, were obtained for each session of both control and experimental days:

1. Heart rate mean; 2. heart rate lability; 3. respiration rate; 4. respiration rate variance; 5. inspiration/respiration ratio; 6. I/R ratio variance; 7. finger skin temperature level; 8.

¹Address: Boston Psychopathic Hospital, 74 Fenwood Road, Boston 15, Mass.

muscle tension level; 9. systolic blood pressure; 10. diastolic blood pressure; 11. pulse pressure; 12. pupil diameter.

To adjust for day-to-day variations in the level of these physiological variables, to aid in eliminating individual variations, and to correct for the variations which normally occur in these variables during the course of the day, the following methods were employed:

1. All physiological data were dealt with in terms of the amount of deviation (expressed as a percent) from the first recording session of the day. This procedure aids in correcting for day-to-day variations in the level of physiological measures and individual variations in initial level.

2. The deviation of each variable in each recording session from the first recording in the control days gives an estimate of day to day variations that normally occur. These variations which may contaminate the effects of L.S.D. are graphically presented side-by-side with the deviations noted in each variable on the L.S.D. days, so that the amount of deviation for the corresponding periods and variables could be compared.

The combination of these two procedures allows us to note, over the course of the day, changes in the physiological variables due primarily to the L.S.D. effects.

B. Psychological Data.—The rate of onset, peaks, fluctuations and intensity of symptoms of subjects administered small doses of L.S.D. were evaluated by clinical psychiatric examinations and by observers who studied the subject throughout the experimental day. The symptoms, based on the subjects' verbalized reports and overt actions, were grouped as somatic, mental, perceptual or social. However, since an increase in symptom intensity could occur that might not be verbalized or observed, a method previously devised (2) for recording the subject's viewpoint, his own evaluation of his L.S.D. reaction was used. The technique adopted consisted essentially of a simple histogram charted by the subject at the end of each experimental day. The extent of the

deviation from normal was indicated by each subject along a vertical axis consisting of 4 reference points: normal, mild, moderate, and severe.

Instructions for filling out the symptom graph were general. The subject was asked to give his own evaluation of the symptom intensity he experienced for the full day beginning with the moment the drug was taken. The basis for the comparison of changes was 1. the previous hour and situation and/or 2. his subjectively felt "normal" state. The quality or characteristics of the changes with reference to specific symptoms is a uniquely subjective matter. For that reason the standards or criteria for symptoms was structured in the form of an open-ended question. A space was provided for comments by which the characteristics of the peaks, changes and duration of the drug effects could be specified and elaborated by each subject.

RESULTS

A. Physiological.—For each physiological variable analyzed, 2 charts are given. The first chart shows the average ² variations that occurred over the course of the control day and the second chart shows the average variations that occurred over the course of the L.S.D. day.

1. Heart rate.

a. *Control day.*—The mean heart rate tended to remain quite stable throughout the day with the rather small changes that did occur (+05% maximum) showing a steady slow rise.

b. *L.S.D. day.*—During the second recording session (the first one after the drug had been administered), there was a decided increase in the heart rate which averaged about 11% higher than the control period rate. This increase continued until the fourth recording session when the peak increase of 18% was noted. The last recording session

²It is important to note that these are average values. Individuals differed somewhat in the degree of reactivity of the various autonomic systems. The relationships between these variations and personality structures will be the topic of a subsequent paper.

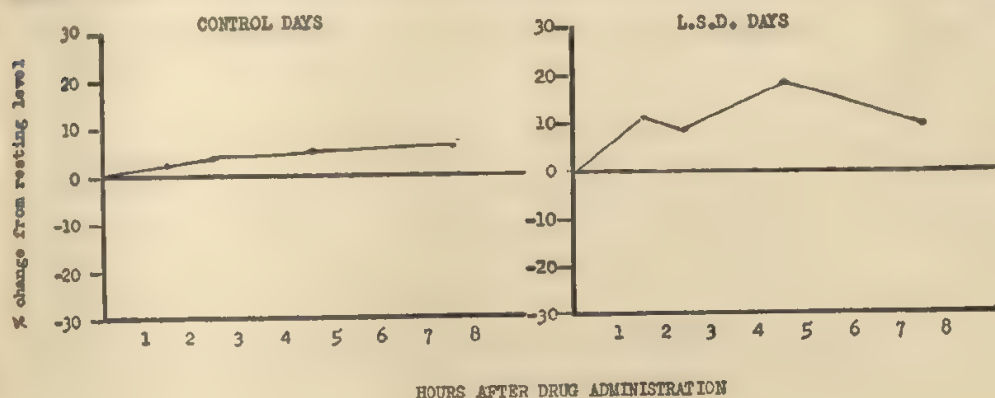


FIG. 1.—Heart Rate.

saw the beginning of a return towards the original heart rate level since the increase dropped from 18 to 10%.

2. Heart lability.

a. *Control day*.—The lability of the heart was not greatly altered through the day. The maximum variation from the first recording session occurred in the fifth session when a 9% increase in lability occurred. The small variations during the other sessions presented no consistent pattern.

b. *L.S.D. day*.—there was a gradual drop in the heart lability (*i.e.* it became more stable) until the fourth session when a sudden decrease of 28% was noted. During the last session the heart lability began to return to normal, as evidenced by the fact that the lability decrease was now only 14%.

3. Systolic Blood Pressure

a. *Control day*.—Very little change in systolic blood pressure was shown throughout the day, the changes never exceeding $\pm 2.8\%$.

b. *L.S.D. day*.—The systolic blood pressure rose until the third period (2½ hrs. post drug administered) when an increase of 12% was noted. A return towards the baseline tended to occur in the subsequent recording sessions.

4. Diastolic Blood Pressure

a. *Control day*.—The largest change (an increase) in the diastolic blood pressure noted during the day was only about 1.5%.

b. *L.S.D. day*.—The diastolic blood pressure rose until the third period (an increase of 10%). It then returned to the baseline by the next session and in

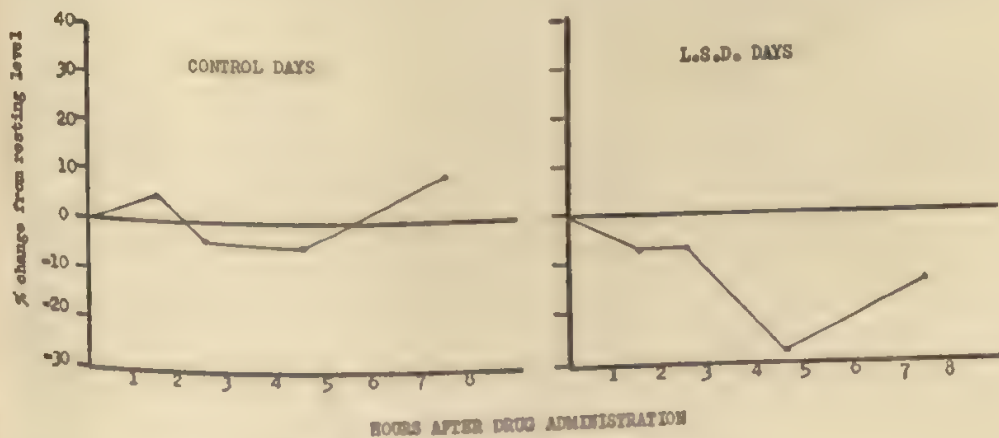


FIG. 2.—Heart Rate Lability (D-score values).

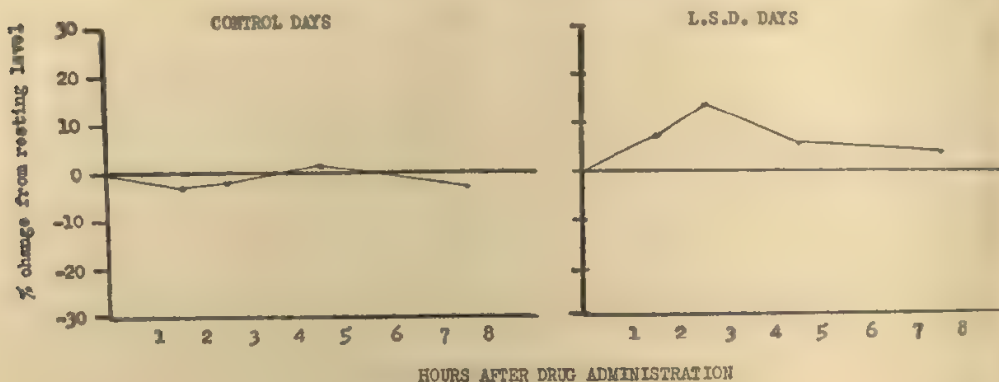


FIG. 3.—Systolic Blood Pressure.

the last a decrease (-2%) in the blood pressure was exhibited.

5. Pulse Pressure

a. *Control day*.—The pulse pressure dropped (-7%) in the first session and then tended to return towards the baseline mean during the next 2 sessions. The last session was featured by a drop in pulse pressure of 9% . In general the pulse pressure was below the control period mean throughout the control day.

b. *L.S.D. day*.—The pulse pressure on the L.S.D. days showed an increase until the fourth session ($+9\%$, $+16\%$, $+19\%$) and then a slight lowering in the last session towards the baseline ($+18\%$).

6. Muscle Tension

a. *Control day*.—A continued and progressive relaxation of the activity

recorded from the frontalis muscles was exhibited on control days (-16% , -18% , -24% , -26%).

b. *L.S.D. day*.—The muscle tension increased on L.S.D. days reaching the peak of tension in the third session ($+33\%$) and then showing relaxation in the latter sessions (returning almost to the mean baseline value ($+06\%$) in the last session).

7. Pupil Diameter

a. *Control day*.—The size of pupils changed very little during the control days and the variations noted were of a constriction nature.

b. *L.S.D. day*.—Pupil diameters, on L.S.D. days, were featured by a rapid and large ($+53\%$) dilation. By the fourth session they began to return to their original size although they were

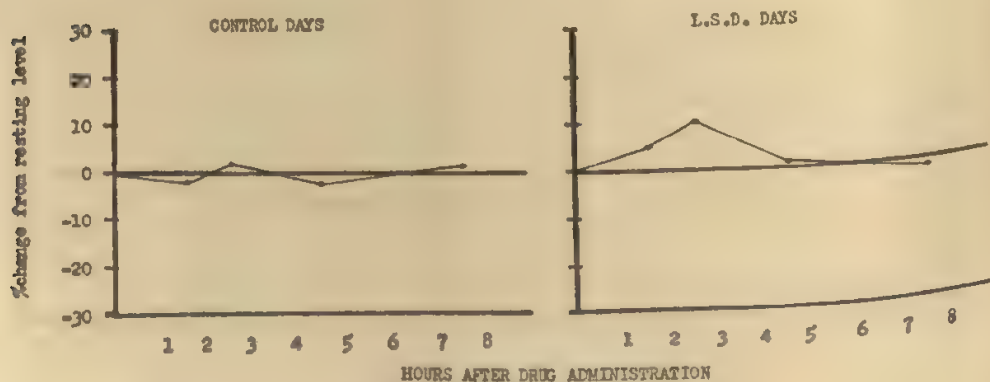
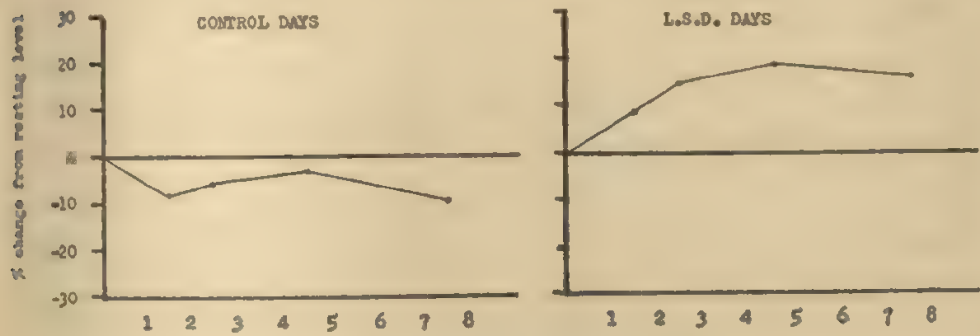
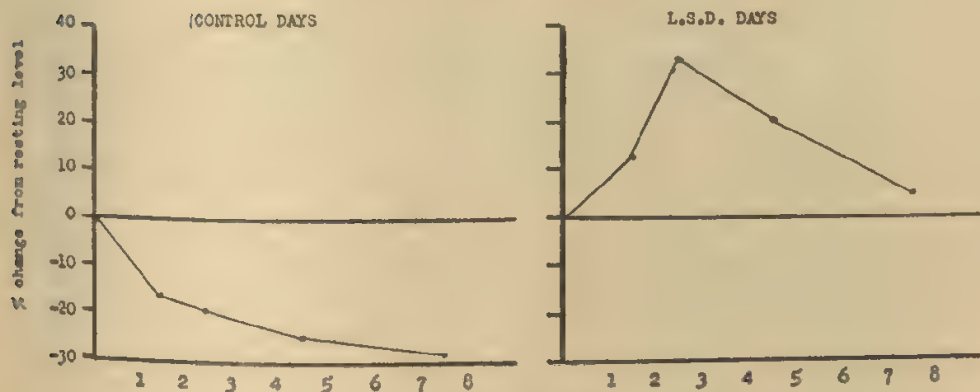


FIG. 4.—Diastolic Blood Pressure.



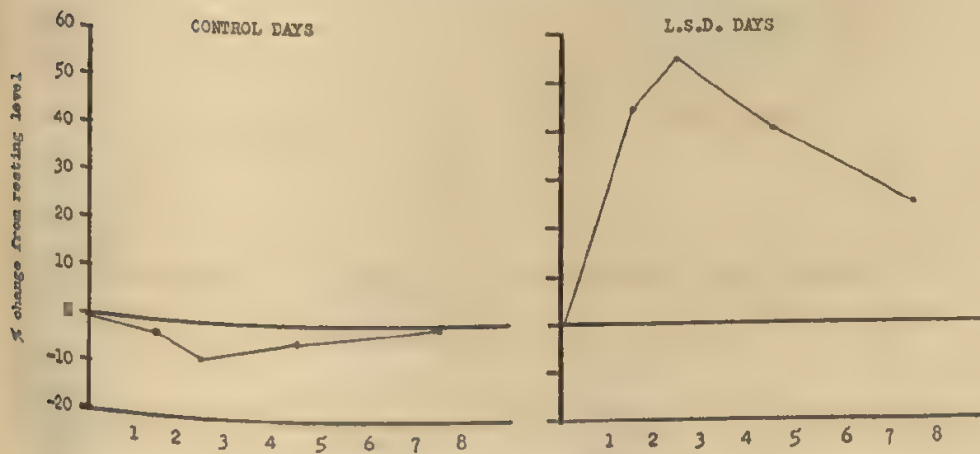
HOURS AFTER DRUG ADMINISTRATION

FIG. 5.—Pulse Pressure.



HOURS AFTER DRUG ADMINISTRATION

FIG. 6.—Muscle Tension.



HOURS AFTER DRUG ADMINISTRATION

FIG. 7.—Pupil Size.

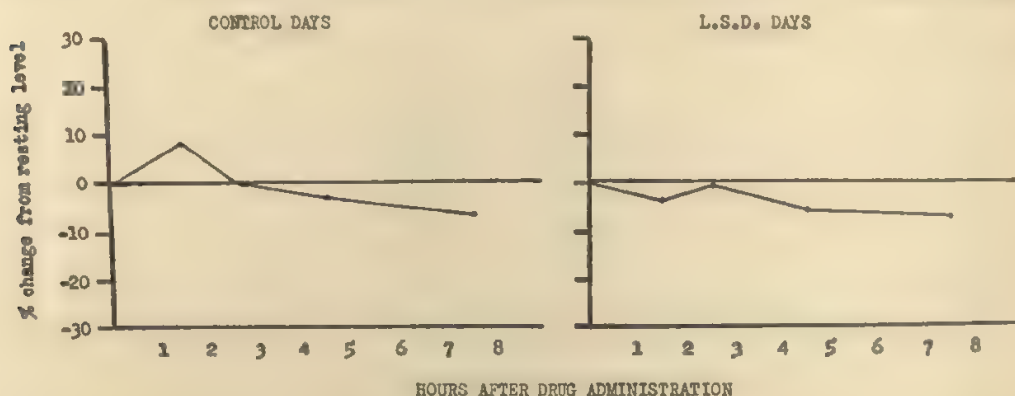


FIG. 8.—Skin Temperature.

still dilated (+24%) at the end of the experiment.

8. Skin Temperature

a. *Control day*.—The pattern of the skin temperature variations, small as they were, (+09% to -07%) showed a rise in the second session and then a continual, though moderate, lowering in the following sessions.

b. *L.S.D. days*.—The skin temperature in L.S.D. days showed a trend towards decreasing, reaching the lowest level (-09%) in the last period.

9. Respiration rate

a. *Control day*.—There was a slowing down of the respiration rate (10%) from the first to the second session, then a speeding (4-5%) of the rate until the last session when a sharp slowing (13%) was observed.

b. *L.S.D. day*.—The respiration rate

pattern became more consistent, with the rate speeding up (8%) in the first post-drug session and then slowing continually until, during the last session, it was slower (3%) than the pre-drug rate for L.S.D. days.

10. Variance of Rate of Respiration

a. *Control day*.—There was little change in the variance of the respiration rate until the last session when a large increase (+97%) in the variability occurs.

b. *L.S.D. days*.—In the first post-drug session the variability was doubled (+197%), followed, in the succeeding sessions by a progressive return towards the control session variability level (+168%, +125%, +35%).

11. Inspiration/Respiration Ratio

a. *Control day*.—The I/R ratio showed a slight decrease in the second

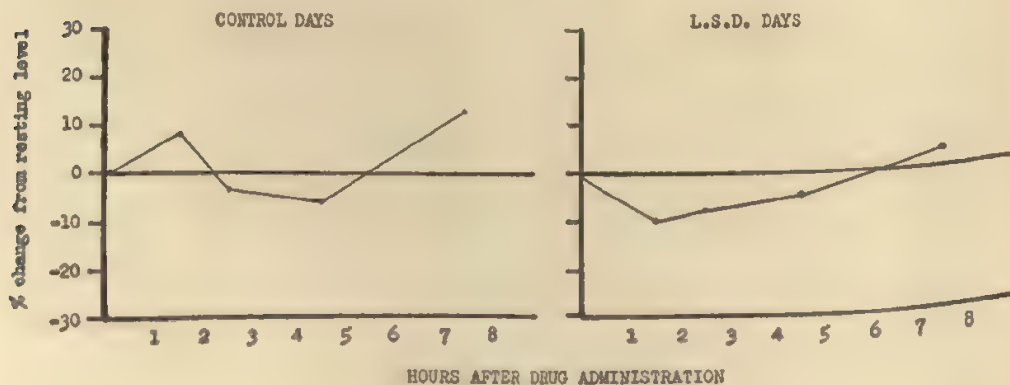


FIG. 9.—Respiration Length.

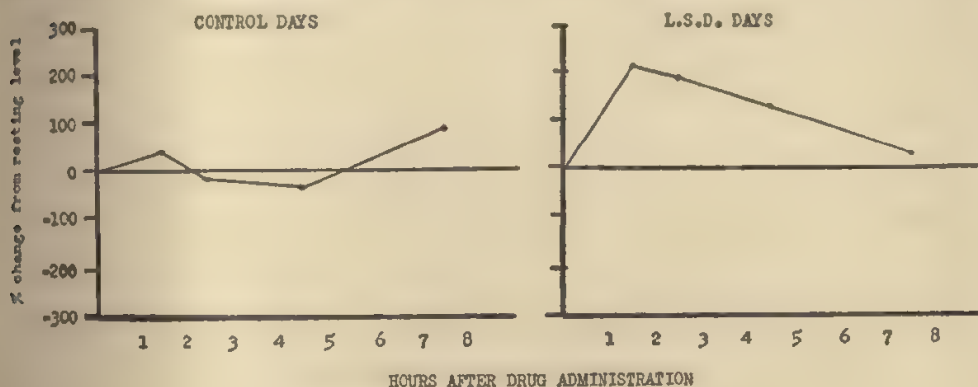


FIG. 10.—Variance of Respiration Length.

and third sessions (-3 to 5%) and then returned to the baseline for the remainder of the experimental sessions.

b. *L.S.D. days.*—The I/R ratio showed a gradual and continued increase from the first session throughout the day, reaching a maximum in last session ($+16\%$).

12. Variance of I/R ratio

a. *Control day.*—The variability of the I/R ratio was decreased during the second and third sessions of the control day (-48%) and then increased towards the initial level in the following sessions (-21% , -7%).

b. *L.S.D. days.*—The variability of the I/R ratio was doubled in the first post-drug session and almost trebled in the second. After reaching this peak of variability, the I/R ratio variance re-

turned towards the baseline in the next 2 sessions.

B. *Psychological.*—For a comprehensive description of clinical symptomology, over the course of the day subsequent to L.S.D. administration we refer the readers to S. Salvatore's article, "Progression of Effects of L.S.D." (3). For purposes of the present study it should be noted that the subjects reacted in an individual manner in terms of type, quality, and intensity of symptom formation. Overall, however, they showed a similar pattern of reaction such that: 1. symptoms (usually of a somatic nature) began to appear within the first hour after L.S.D. and were felt as mild or moderate in intensity; 2. during the next hour an increase in the number of clinical symptoms occurred, with an intensification of feeling of deviation from normality and some change in symptom

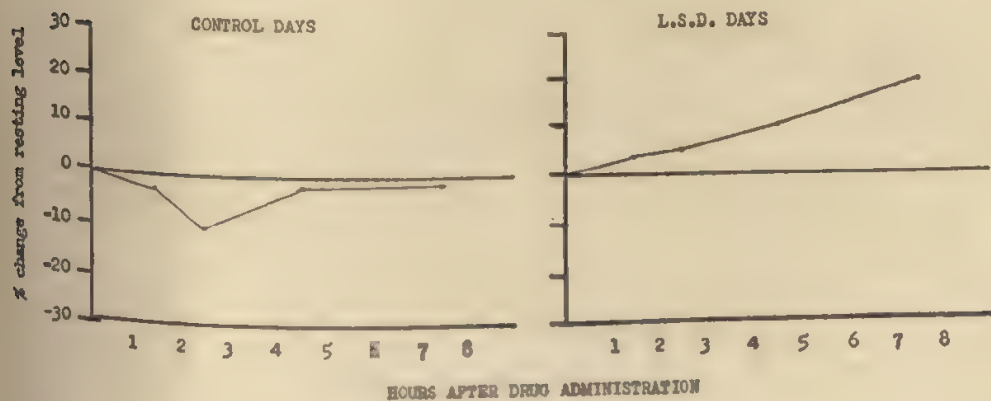


FIG. 11.—Inspiration/Respiration Ratio.

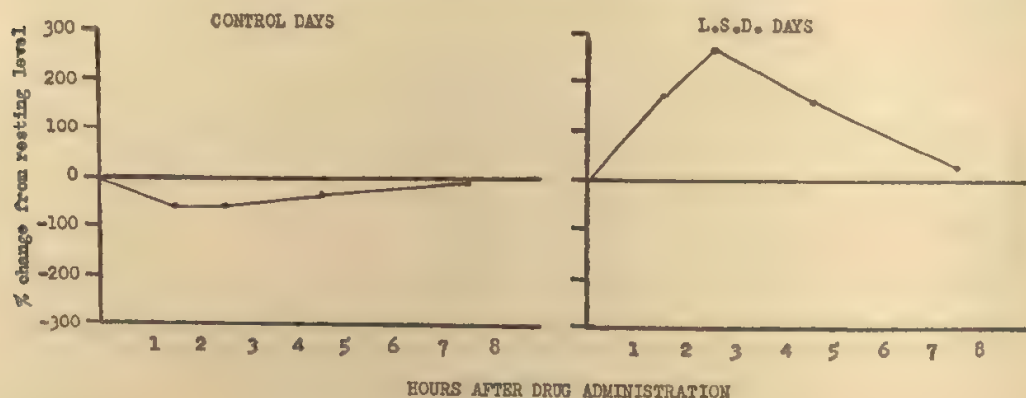


FIG. 12.—Inspiration/Respiration Ratio Variance.

quality—from somatic to predominantly ideational and perceptual distortions; 3. the peak deviation from normality was felt from the second to the fourth hour, with feelings of unreality and confusion being most prevalent; 4. these symptoms subsequently began to lose their strength, gradually diminishing in frequency and intensity until the end of the experimental day (8-9 hours after L.S.D. was administered).

CORRELATION OF CLINICAL AND PHYSIOLOGICAL EVENTS

The incidence and intensity of behavioral deviation as evidenced by the observer's reports and by the subjectively perceived symptoms coincided through the day, in general, with the incidence and intensity of physiological deviation. Both indices began to show changes within the first half hour, reached a peak of deviation between the third and fourth hours, and returned to the pre-drug level by the eighth hour. It is significant that these changes occur concomitantly, thus emphasizing the Cannon principle of simultaneity of emotional expressions and physiological functioning.

DISCUSSION

The reactions exhibited in our measures of the autonomic nervous system can be explained by a general sympathetic excitation that reached a peak between the third and fourth hours after the administration of L.S.D.; subsequently there was a gradual decline in sympathetic excitation by the

eighth hour, returned to the pre-drug level of activity. Three exceptions to this were noted in that the pulse pressure, the skin temperature and the I/R ratio reached their peak of deviation during the last recording session (the eighth hour after L.S.D.) and showed little tendency to return to the initial level.

The latter phenomena may probably be ascribed to the fact that autonomic nervous system measures are more sensitive as well as more objective than psychological indices. Thus after psychological effects and most of the physiologic reactions of the drug have subsided, residual changes not detectable by other means, may be demonstrated.

In psychotic subjects in whom sympathetic tone and high physiologic reactivity predominated (associated with increased anxiety states) it has been demonstrated that following lobotomy there is a decrease in sympathetic tone (drop in heart rate, more reactive heart, decrease in I/R variability, etc.)—which is associated with decreased anxiety, improved social adjustment, and improved intellectual functioning.

Essentially, this is what occurs with L.S.D. Subsequent to the administration of the drug, severe personality disturbances are produced with a concomitant increase in sympathetic tension; as these disturbances were reduced the sympathetic tone decreased and tended to return towards the pre-drug "normal" level.

The question may be asked, "Is an increase in sympathetic tension a necessary physiological concomitant of psychosis?" Our

studies would indicate that this may be the case.

SUMMARY

The physiological and psychological changes throughout the day subsequent to the administration of Lysergic Acid Diethylamide were recorded and analyses made of their interrelations. The Harvard Polygraph was used to simultaneously and continuously record heart rate, respiration, skin temperature, blood pressure, and muscle tension. Recordings were made under resting conditions immediately before and $1\frac{1}{2}$, $2\frac{1}{2}$, $4\frac{1}{2}$, and $7\frac{1}{2}$ hours subsequent to L.S.D. administration.

Physiologically, a general sympathetic excitation resulted, which reached a peak of tension in 3 to 4 hours and then gradually returned to the pre-L.S.D. level by the eighth hour. Heart rate increased and became more stable, systolic and diastolic blood pressures were elevated, pulse pressure rose, muscle tension mounted, skin temperature tended to drop, breathing became faster and more

variable, the inspiration/respiration ratio decreased and became more variable, and pupillary dilation occurred. No such drastic changes were noted in the control (placebo) days.

Changes occurred psychologically that paralleled the physiological changes. Deviation from "normality" both behaviorally and subjectively was most pronounced, in number of symptoms expressed and intensity of expression, about 3 to 4 hours after L.S.D. administration and gradually diminished until the eighth hour.

Some of the implications of this study are mentioned and the similarity between the sequences of events post-L.S.D. with the changes pre-post lobotomy are discussed.

BIBLIOGRAPHY

1. DiMascio, Suter, Hyde and Greenblatt: *Psych. Quart.* 3: 57, Jan. 1957.
2. L.S.D. Annual Report, 1953-1954. Geschickter Foundation.
3. Salvatore, S., and Hyde, R. W. *Arch. Neurol. & Psychiat.*, 76: 50, July, 1956.

THERAPEUTIC AND TOXIC EFFECTS OF CHLORPROMAZINE AMONG 3,014 HOSPITALIZED CASES

REUBEN M. CARES, M.D., EDWARD ASRICAN, M.D., MAURICE FENICHEL, M.D.,
PAUL SACK, M.D., AND JEAN SEVERINO, B.A.¹

Therapeutic response, side-effects and toxicity among 3,014 patients on chlorpromazine were studied during an 18 month period in a mental hospital with an average census of 9,200. The findings bear on the relation of moderate dosage to a low incidence of jaundice and clinical side-effects. Serial laboratory examinations may have been instrumental, through clinical awareness, in minimizing the severity of hepatic and/or leukocytic derangements. The large numbers of cases and laboratory tests lend themselves to an adequate statistical evaluation.

A few months after Winkelman's publication(1) in May 1954, on the first use of chlorpromazine in this country, we conducted a pilot study on 90 patients to determine optimum dosages and types of complications of this tranquilizing agent. With negligible ill effects established in this group, a hospital-wide study project was initiated January 1, 1955, and terminated June 30, 1956. The 23 physicians among 13 buildings of the hospital complex used dosages that were generally conservative throughout the 18 month period. During the first 6 months there was some restriction in the admission to treatment of categories of mental disease. Thereafter, the medical staff exercised free choice among all classified psychotics.

In addition to the clinical side-effects, the familiar complications of jaundice, leukopenia and agranulocytosis were well publicized and even over-emphasized to the staff. Winkelman had reported 5 cases of jaundice in 1,942 patients; in one state hospital, jaundice had occurred in 18 of 1,300 patients(2). The biochemical changes and histopathology of the liver in jaundice from chlorpromazine had been adequately described(3). It was known that 2 fatalities from liver toxicity had allegedly followed this new therapy(4).

This sobering intelligence ensured continued alertness of the staff to possible

hazards of chlorpromazine treatment even though some authors(5) felt strongly that the seriousness of side-effects and toxic complications were overrated. Throughout the program our physicians maintained cautious administration of the drug. Since a more objective evaluation of toxic complications was possible by laboratory studies, well over two-thirds of all cases had periodic liver function tests and hemograms performed.

MATERIAL AND METHODS

Case Selection and Laboratory Checks.—An extended range and number of acute and chronic mental diseases composed the institutional population. Among most of the chronic cases placed on chlorpromazine, there had been poor or short-lived response to single or combined courses of electroshock, insulin coma, sedation and lobotomy. Between January 1955 and June 1956, 3,014 patients were admitted to chlorpromazine therapy.² All age groups and both sexes were sampled—from boys and girls, aged 6 to 16—to senile patients as old as 81. The management of treatment crystallized into 3 distinct phases of 6 months each (Table 1).

Phase I was concerned with indoctrinating the staff in the pharmacology of chlor-

TABLE 1

CASES ADMITTED TO TREATMENT

Phase	Males	Females	Total	Jaundice cases	
				No.	%
1. Jan.-June, 1955 ..	323	413	736	3	.41
2. July-Dec., 1955 ..	428	485	913	3	.30
3. Jan.-June, 1956 ..	583	632	1,215	7	.58
(Determinate group)					
	1,384	1,630	3,014	13	.43

² Not included were 22 patients on combined chlorpromazine and reserpine therapy, none of whom showed complications.

¹ Kings Park State Hospital, Kings Park, New York

promazine and searching for the most common toxic complications. Laboratory tests were done on nearly 200 patients in this group, chiefly when any clinical side-effects were noted. A battery of liver function tests and complete blood counts at weekly intervals were carried out on the 3 jaundiced patients and on all others on whom abnormal values of serum bilirubin or white blood cell counts were found.

Phase 2: There were 1,063 new cases in this second half-year period on whom therapeutic response, side-effects and toxic complications were documented. One-quarter of the 1,063 cases had pretreatment blood counts and serum bilirubin determinations. All cases, sometime during the first months of treatment, had these tests done on one or more occasions. Serum alkaline phosphatase determinations (Bodansky), cephalin flocculation and thymol turbidity tests were performed if an elevated bilirubin was discovered.

Phase 3: In this Determinate Group, each of the 1,215 new patients was subjected to a systematized procedure of clinical and pathological observation. Dosage, side-effects, therapeutic response and disposition of the patient were recorded. All patients were on the following laboratory regimen: (a) In the week before treatment, a complete blood count, total serum bilirubin and serum alkaline phosphatase. (b) These 3 tests were repeated between the 14th to 21st day of treatment and thereafter at 3 to 4 week intervals. Patients with abnormal values had these tests repeated weekly or oftener.

Dosage and Duration of Treatment.—The dosage, on the first day, was 25-50 mgm. of chlorpromazine intramuscularly; then 75 mgm. IM, plus 100-200 mgm. orally from the 2nd to 7th day for two-thirds of the 3,014 cases; the other third received 300-400 mgm. orally, from the beginning. As the physicians gained experience and lessened their apprehension of immediately unfavorable reactions, the intramuscular route was largely abandoned in the last 6 months, especially for senile patients who commonly required bed rest after this route. We found no clear cut clinical picture of skin hypersensitivity following the first dose. The real merit of these putative doses was

in the detection of transient hypotension necessitating temporary bed rest, chiefly during the first week of medication.

About 90% of all patients received average dosages between 300-400 mgm. daily from the 2nd week to the 2nd or 3rd month; most of the remainder got smaller amounts. As soon as the mental condition showed improvement, the dosage was gradually reduced to a maintenance level of 200 mgm. daily. This was continued until eligibility for discharge. During the first 6 months (Phase 1), 26 cases were treated with 500 to 1,000 mgm. daily but showed no appreciable therapeutic advantage. We saw no need for the large doses given by Kinross-Wright (5b). In his 251 cases, the daily dose averaged 1,400 mgms. with a maximum of 3,400 mgms.

Our courses ranged from 3 to 18 months except that 77 patients have, at this writing, received chlorpromazine several months beyond the 18 month period without complications.

Program Deficiencies.—Therapeutic response, side-effects and toxic complications among the 3,014 cases were admittedly studied in breadth without great depth. Serial laboratory checks were done at 2 to 4 weeks intervals which may not be frequent enough. The large number of cases and data so recorded may offset some statistical deficiencies that might have been avoided in more frequent observations. Pooling of the experiences of 23 physicians had the merit of integrating a wide range of attitudes to the effectiveness of chlorpromazine therapy.

Minor hepatic or leukopenic complications may have been overlooked in the early months of the project. Serious sequelae were not likely to be missed during daily ward rounds since continued medication would expectedly aggravate the ill effects. During Phase 1, serum bilirubin elevations between 1 and 2 mgms. occasioned temporary suspensions of medication that were not always recorded. As experience with these slight bilirubin elevations showed only a small likelihood of a further rise on continued medication, the interruptions were eliminated.

Even with occasional deviations from the prescribed schedule, over 21,000 laboratory

determinations were performed during 1955. (Phases 1 and 2), on 1,799 new cases—an average of over 11 tests per case. The particular tests were selected chiefly for interpretative consistency, technical simplicity, a minimum of venepunctures and suitability with small blood samples.

CLINICAL ASPECTS

Therapeutic Action.—Response to treatment during the 18 month period was adequately charted, in spite of intramural transfers, on 8 of the 13 psychiatric services in the program. The results among 1,534 cases treated from 3 to over 18 months are summarized in Table 2.

There are no universally accepted parameters for recording shades of improvement in mental disease. For this reason, only two states of therapeutic response are listed in Table 2. The first, "Fair," includes any noticeable change, for the better, in any of the mental symptoms in the field of behavior. The second, "Good," includes the first stage of behavioral improvement plus a decrease or removal of delusional or hallucinatory features characteristic of the mental diagnosis. Among the 8 services of Table 2,

therapeutic appraisal by the optimists and skeptics balanced out to merge with the judgments of those with more neutral approach.

The influence of chronicity of disease on the effectiveness of chlorpromazine was not generally calculated although one of us, (E.A.), in 247 highly disturbed chronic cases, found the average duration of illness was 10 years and 2 months. It was seen early that the drug follows the therapeutic *cliché* that the degree of improvement is inversely proportional to the duration of the disease.

The percentage of any degree of improvement by chlorpromazine is outlined in Table 2. This is slightly higher than in other reports, particularly that of Goldman on 506 cases(6)—first, because we recorded the mildest symptomatic changes and secondly, we usually treated for longer periods. One minor exception to prior reports is that we did not note frequent early disappearance of hallucinations. These largely persisted for some months although they were less apparent in the general suppression of untoward psychomotor activity. There were no actual "cures" in the absence of suitably

TABLE 2
THERAPEUTIC RESPONSE, 1,534 CASES

(Services of Drs. Asrican, Bereslavsky, Catalano, Fassman, Fenichel, Jarosz, Mateciunas, vonTauber)

Mental diagnoses	No. cases	Good ^a	Fair ^b	No change	Percent improved	Released (among 597 only)
Manic-depressive	61	38	16	7	88	18
Psychosis due to alcoholism	44	16	24	4	89	4
Dementia praecox:						
Catatonic	270	105	116	49	82	9
Hebephrenic	336	125	141	70	79	5
Juvenile	43	10	22	11	74	—
Paranoid	464	203	186	75	84	34
Simple	21	11	6	4	80	2
Miscellaneous ^c	141	20	85	36	75	1
Psychosis c mental deficiency.....	49	6	25	18	62	—
Agitated states ^d convulsive disorder ...	29	3	19	7	75	—
Involuntal psychosis ^e	76	10	19	47 ^f	38	—
Totals	1,534	547	659	328	74	73 (of 597)

^a Good indicates both behavioral and ideational improvement with 10-20% suitability for discharge on convalescent care.
^b Fair indicates any degree of sustained improvement in behavior with little or no change in psychosis—not eligible for discharge.
^c Includes chronic brain syndromes such as cerebral arteriosclerosis, Huntington's Chorea, postencephalitic syndromes, traumatic psychoses, general paresis and a few psychoneuroses or psychopathic personalities.
^d Convulsive symptoms not markedly affected—anticonvulsant agent continued with chlorpromazine.
^e Includes melancholia and paranoid states.
^f One-third of these became worse in contrast to other psychoses with no adverse effect by the drug.

follow-up periods. On 3 chronic services of 597 cases, (12%), were discharged on convalescent status. On the 5 services, discharge rates ranged from 5% to 15% depending on the diagnosis and composition of case material.

The prominent effect of chlorpromazine, especially on patients hitherto not amenable to other forms of mental therapy, was on emotional symptoms. Response was usually evident within the first month, but often required over 3 months of medication. Moderation of the underlying psychosis was gradual and less constant, requiring at least 2 and commonly up to 6 months of continuous treatment to modify or eliminate delusional or persecutory ideas.

Chlorpromazine was found to be of minimal or uncertain effect in purely depressive states—involutional melancholia, catatonic stupor, severe social withdrawal, and the like. In a large minority of such psychoses there was an aggravation of symptoms, as also noted by Hoch and coworkers(7) in their 2-year study of 300 mental cases. The most satisfying responses were in agitated phases of dementia praecox, manic-depressive (manic), and alcoholic psychoses. In excited patients with mental deficiency or convulsive disorders, chlorpromazine was primarily a tranquilizer, only partly altering the fundamental disorder. This also applied to most of the organic psychoses listed under Miscellaneous in Table 2. On one continued-treatment service, 14 female epileptics on anticonvulsant medication had suffered a total of 64 seizures in the 6 months before chlorpromazine. During the first 6 months on the drug, there were only 36 seizures in the group. This reduction may be related to diminished susceptibility to environmental stimuli.

The consensus was that at least 3 months of sustained treatment was needed to judge the efficacy of chlorpromazine. The technique tried elsewhere of repeated 1 to 2 month courses of dosage was abandoned early because of common relapses within a few weeks after discontinuing the drug. Winkelman has rightly stated(8) that chlorpromazine medication is as sensitive and skilled a procedure as the use of insulin for the diabetic or digitalis for the cardiac.

Clinical Side-Effects.—Table 3 summarizes the pronounced side-effects among the 1,534 patients. Undesirable effects have been publicized but their frequency and weight vary with the observer and diagnostic categories. Among our hospitalized patients, subjective complaints during treatment were far less prominent than in office practice dealing with a large component of psychoneuroses and anxiety states. The latest study of side-effects has been by Cohen(9) on 1,400 inpatients. He divided complications into major and minor groups with the former, as we found, far less frequent. We do not consider, as he did, the commonly occurring somnolence to be a complication, but rather a part of the tranquilizing action. Table 3 excludes those undesirable effects which were ephemeral, or which caused no real distress. If one eliminates single episodes, lasting a few minutes or hours during months of treatment, the forms and frequency of side-effects are not impressive. We encountered no permanent sequelae in any case, even in well over 18 months of medication among 77 patients. Complications were of greater moment for the apprehensive physician than for the patients themselves.

Excluding jaundice and severe neutropenia, the side-effects in therapy of chlorpromazine should be regarded in the same tolerant light as those accompanying antihistaminic or atropine therapy. Aside from jaundice, these disturbances disappeared in a few days to a week, even if medication was not stopped. It is possible that our low incidence is related to the consistently mod-

TABLE 3

SIDE-EFFECTS IN 1,534 PATIENTS OF TABLE 2

	No.	%
Jaundice	9	.6
Hypotension	52	3.4
Tremors and/or parkinsonism	25	1.7
Fever	12	.8
Tachycardia	27	2.5
Skin rashes	62	4.0
Dizziness	34	2.2
Diarrhea	9	.6
Facial edema or pallor	2	.1
Convulsions	17	1.1
Lactation	6	.4
Other (dry mouth, nasal congestion, swelling of breasts, nausea)	16	1.0

erate doses employed, since such side-effects as apathy, blurring of vision, Parkinsonism or swelling of the female breasts have been associated with high dosages(9).

Only 6 of the 25 patients with tremors showed true Parkinsonism with typical facies, pill-rolling and changes in gait or speech. The multiform rashes occurring in the first 2 weeks do not include the occasional photosensitive reactions. Photosensitivity became increasingly rare as prophylactic measures were emphasized. Jaundice was present in 9 of 1,534 clinically documented cases as compared with 13 among the entire series of 3,014 patients. Fever, usually associated with tachycardia, occurred chiefly in the first few days of treatment and was usually below 101° by rectum. Convulsions occurring once or several times were noted in 17 patients although most reports do not include this side-effect.

A few physicians, more concerned with mental improvement, maintained treatment in the presence of many of the listed side-effects. It was a common experience that, excluding rash, jaundice, or a pronounced leukopenia, the other ill effects would almost always disappear in a few weeks while on medication either in the usual or reduced amounts.

LABORATORY ASPECTS

Blood counts were made in over half of all the cases in the week before beginning treatment. A like number of bilirubin controls was used to exclude preexisting liver diseases. The rationale of selection in the Determinate Phase 3 of only two liver function tests, the total serum bilirubin and the rapid serum alkaline phosphatase technique recently devised by Goldenberg(10), is presented elsewhere by Cares and Newman(11). The Goldenberg method for alkaline phosphatase requires only 0.1 ml. of serum; it is not affected by hemolysis and its few steps are completed in a half-hour. Its accuracy equals or exceeds currently used procedures.

Other hepatic function tests—cephalin flocculation, thymol turbidity, cholesterol-esters, etc., which were frequently performed in Phases 1 and 2, were found too equivocal

as has been previously noted(12). The bromsulphthalein test could not be used where toxic jaundice was a potential danger.

Doses and Liver Function in Jaundice.—There were 13 cases of toxic jaundice among the 3,014 patients on chlorpromazine therapy. The incidence of jaundice is lower than in the range from 1-3% usually encountered. Our figure of 0.43% is comparable to 0.62% of Cohen and Archer in 800 cases(13) and 0.2% of Goldman with 506 treated(6). Increased clinical alertness among our staff stemming from periodic laboratory checks, may have played a part in shortening or aborting the course of jaundice or other serious complications.

Table 4 summarizes the data of the 13 cases of jaundice during the 18 month program. (In the same period, 9 cases of obstructive jaundice from other causes were present in the hospital.) No jaundice was noted before the critical 2nd or 3rd week as has been evident in other studies(14, 4b). Case 8, with a mild jaundice for a few weeks, was discovered by serial bilirubin tests after 66 days of treatment. This late onset is not noted in other published reports.

Factors of age, sex and race were not significant among the 13 icteric cases. The dosage conformed to the average range except that Case 2 received only 1,300 mgm. in 26 days but had an elevated bilirubin for 350 days. In this patient, the drug had been continued through oversight for 8 days after the onset of jaundice. In contrast, Case 8 received over 26,000 mgm. before developing mild jaundice of short duration. The same case, on a second course of half the previous dosage, started 6 days after jaundice abated, showed normal liver function tests in the subsequent 2 months.

Toxic signs and symptoms associated with jaundice are outlined in Table 5. The subjective symptoms, as in most psychotics, were difficult to grade. They largely disappeared in a few days to a week after stopping medication.

Among the 1,215 cases in Determinate Phase 3, that had received serial liver function tests, there were 14 additional patients with mild elevation of serum bilirubin on treatment; 5 had values between 2 and 4 mgms/% and 9 cases between 1.25 and 2.

TABLE 4
DOSAGE AND LIVER FUNCTION TESTS, 13 JAUNDICED CASES IN 3,014 TREATED

Case	Age	M.	F.	Chlorpromazine				Jaundice				Alkaline phosphatase, peak unit/100 Mi	
				Daily amount—mgm.			Days	Total dose	Onset day	Duration days	Bilirubin, peak		
				Min.	Max.	Average					Mg/100 Mi		Week
1.	47	—	x	100	300	200	10	1,900	11	65	8.6	15.2	3rd
2.	59	—	x	25	100	50	26	1,300	24	350	20.4	21.0	4th
3.	33	x	—	50	300	200	16	3,500	15	64	12.0	16.0	3rd
4.	26	—	x	100	200	150	21	3,800	21	60	7.5	16.2	3rd
5.	39	x	—	100	200	150	32	5,050	25	70	20.	14.9	5th
6.	43	x	—	25	300	100	25	2,500	31	40	9.7	12.5	5th
7.	41	x	—	75	200	200	22	4,250	22	130	36.0 ^a	10.1	9th
8.	35	—	x	400	400	400	66	26,400	66	18 ^b	7.41	14.8	10th
9.	45	—	x	400	400	400	13 ^c	5,200	20	10	15.0	32.4	3rd
10.	66	—	x	200	200	200	24	4,800	24	7	12.07	28.0	4th
11.	48	—	x	200	400	300	22	6,000	18	6	7.23	24.0	3rd
12.	45	x	—	300	300	300	14	4,200	14	6	4.06	40.0	2nd
13.	36	—	x	300	300	300	18	5,400	18	12	9.52	18.9	3rd
Average	43	—	—	175	277	290	24	5,715	23	64	13.49	20.3	5th
Low	26	—	—	—	—	—	13	1,300	11	6	4.06	10.1	2nd
High	66	—	—	—	—	—	66	26,400	66	350	33.70	40.0	10th

^a Normal Bilirubin on 14th day of treatment. On 2nd day of treatment.

^a Normal Bilirubin on 14th day of treatment. On 22nd day bilirubin of 18.

^b 6 days after jaundice subsided, a second course of 200 mgm. daily for 60 days gave no recurrence of jaundice.

^c Received Chlorpromazine for 13 days before admission. Jaundice noticed about 7 days after admission.

TABLE 5
SYMPTOMS AMONG 13 JAUNDICED CASES

	In week before jaundice no. cases	During jaundice no. cases
Anorexia	9	10
Nausea	8	11
Vomiting	4	7
Abdominal pain	4	7
Weakness	5	7
Diarrhea	4	5
Fever	4	2
Malaise	3	3
Itching	2	4
Rash	2	2
Weight loss	2	5
Tremors	—	2

In the face of continued treatment, these values commonly fell below 1 mgm. in a few days or weeks, except in one case where the bilirubin stayed above 2 mgms. for 62 days; another with 2.5 mgm. found in the second week of therapy, dropped below 1 mgm. two days later. Among the pre-treatment controls there were 18 patients with bilirubin values between 1 and 1.5 who showed no rise during treatment.

A statistical evaluation of the collected serum bilirubin readings during Phase 3 among 1,215 patients, including 7 jaundiced cases, has been made by Cares and Newman(11). They found that the mean serum bilirubin values showed no significant difference from the control values. Viewed as a whole, the treated group experienced negligible rises of serum bilirubin during the first weeks and months.

Correlations of Jaundice.—(a) *Onset and Duration:* The onset is calculated in Table 4 from the first day of treatment. Case 1, icteric on the 11th day, remained so for 65 days. Case 2, with no jaundice until the 24th day, was icteric for almost a year. In case 8, with the latest onset, 66 days, jaundice lasted only 18 days. No consistent relationship could be found.

(b) *Total Dosage and Duration:* Case 2, with the lowest total dose, had jaundice for 350 days while in Case 8, receiving the greatest dose, icterus lasted 18 days. Case 7 received 4,250 mgms. and jaundice persisted for 120 days. No relation existed between the total dosage and the period of jaundice.

(c) *Intensity of Jaundice and Duration:*

Cases 2 and 7, with high bilirubin values, remained icteric considerably longer than Cases 4, 10 and 12 with medium or low values. This conforms with the course of icterus in non-chlorpromazine conditions.

(d) *Bilirubin and phosphatase tests:* All cases with jaundice showed elevated alkaline phosphatase roughly paralleling the rise of bilirubin. This is amplified below.

The jaundice caused by chlorpromazine is a highly individual feature of acceptably low incidence without desirable stigmata of predilection. Its mechanism is that of an intra-hepatic biliary obstruction (3c), reversible in nature. We agree with other workers(9, 15) that the jaundice is an expression of an unpredictable drug idiosyncrasy, comparable to the occasional reaction seen in the use of thiouracil, methyltestosterone and certain arsenicals.

Serum Alkaline Phosphatase.—It was evident quite early in the 18-month program that one effect of chlorpromazine was a frequent elevation of the serum alkaline phosphatase. This was intercurrently confirmed in late 1955 by Stacey and associates(14) who were impressed by hyperphosphatasemia occurring at or before the rise in bilirubin. In 7 of their 70 patients subjected to serial liver function tests, a rise in serum alkaline phosphatase was manifested between the 9th and 19th day of treatment. In contrast, a recent study of hepatic pathology in 4 cases of jaundice, showed normal alkaline phosphatase levels with high total bilirubin values(3c). Contrary to Goldenberg's(16) recommendations, we purposely did not stop treatment when phosphatase readings were high, provided the serum bilirubin stayed normal. This was done to ascertain the frequency of icterus associated with phosphatase rises, as seen in Table 6.

The normal values in this table for serum alkaline phosphatase are from those given by Goldenberg(16). However, normal values in our laboratory with this same procedure, ranged between 0.8 and 6.4 units with a mean of 3.1 on 469 pretreatment determinations. None of this screened group had any manifest liver or bone pathology.

The normal upper limit of serum alkaline phosphatase varies with the method and the

TABLE 6

SERUM ALKALINE PHOSPHATASE, GOLDENBERG UNITS/100 ML. DETERMINATION PHASE 3

Group	Total cases	Elevated values *					
		Low-range		Medium range		High range	
		3.9-5.5	%	5.5-8	%	Over 8	%
A—Controls (pre-treatment)	469	61	13.0	14	3.1	1	.2
B—Treated	1,215	179	14.7	89	7.3	58	4.8
C—Jaundice (in 3,014 cases)	13	—	—	—	—	13	—
Totals		240		103		72	

* Maximum reading in 2 to 8 determinations, each case. Normal range .9 to 3.9 units. On treatment, values to 5 are common. Above 5.5 units, treatment not recommended by Goldenberg.

particular laboratory.^a The Goldenberg procedure yields values corresponding to the Bodansky method. Bodansky phosphatase values of less than 7 units are considered to be of little clinical significance in the absence of other relevant findings. Table 6 indicates that the serum alkaline phosphatase may rise in some cases on chlorpromazine treatment.

In serial liver function tests, 7 of 70 cases treated by Stacey's group (14) had elevated serum alkaline phosphatase considered unrelated to a rise in serum bilirubin. In a statistical computation on our 1,215 cases, Cares and Newman (11) found a positive correlation of 0.51 (as opposed to $\pm .2$ or $\pm .3$ attributable to pure chance). This figure is too low to be of clinical value. Among the 72 cases listed in Table 6, with over 8 phosphatase units, 13 had jaundice, a frequency of less than 1 in 5.

The significance of elevated alkaline phosphatase as an indicator of impending jaundice from chlorpromazine is not pronounced. In Table 6, there is doubling of the frequency in the middle range, 5.5-8 units, over the control group. The rise usually occurred in the first 3 weeks on treatment. We had 2 cases with serum bilirubin values below 1 mgm. that had over 20 phosphatase units repeatedly during several months on treatment. Normal phosphatase readings (below 3.9) with a rise up to 3 mgms./% of bilirubin were encountered in 8 of the 14 subicteric cases discussed above. The weak relation existing between serum bilirubin and alkaline phosphatase, in our large series of tests, was of no help in predicting toxic jaundice.

^a Checked in Goldenberg's laboratory, our sera showed an average reading .2 unit lower than our own findings of alkaline phosphatase, a reasonable deviation between laboratories.

Leukopenia and Altered Hemograms.—Leukopenia and agranulocytosis have been reported in chlorpromazine therapy but quantitative changes are often not mentioned. Denber and Bird noted 2 cases, simply labeled as leukopenia, among 1,300 treated. Two recently reported deaths from agranulocytosis following 2 months of chlorpromazine administration (17), point up the need for repeated blood cell counts, certainly during the first 3 or 4 months. During Phase 2, no case with less than 4,000 leukocytes was present among 1,063 cases started on treatment. In Phase 3, 2 to 8 complete blood counts were done on the 1,215 patients and 2 cases of severe neutropenia and agranulopenia were found. Secondary anemia, stemming from the use of the drug did not occur in any of the 3,014 cases.

Our laboratory files were reviewed for the incidence of leukopenia and neutropenia on a control group in Phase 3. All definite blood dyscrasias or evident systemic disorders inducing depressed leukocyte values were excluded from this group, which consisted of 757 recent hospital admissions and 490 patients in the week before starting chlorpromazine, 1,247 in all. The comparative figures comprise Table 7.

Among the 1,247 controls, 11.5% had counts between 4,000 and 5,000 leukocytes/cu.mm. compared with 22.6% among the treated cases. Between 3,000 and 4,000 w.b.c., the percentage is respectively 1.4 and 2.5. The incidence of leukopenia present in the control group has been consistent in our hospital for the past 5 years, since 35% of admissions are over 60 years of age, in whom mild anemia and leukopenia are not infrequent. Among the 490 cases who had pretreatment blood counts, a good proportion

TABLE 7

LEUKOPENIA AND NEUTROPENIA, DETERMINATE PHASE 3
(Minimum Values in Serial Counts, cu. mm.)

Group	Total cases	4M-5M w.b.c.	%	Neutrophils %	3M-4M w.b.c.	%	Neutrophils %	2M-3M w.b.c.	%	1M-2M w.b.c.
Control ...	1,247	143	11.5	38-84	17	1.4	42-74	2	38-44	—
Treated ...	1,215	275	22.6	34-82	30	2.5	28-68	4	22-46	—

* One case had 1,650 w.b.c. with 4% neutrophils; the second case, 1,800 w.b.c. with 12% neutrophils.

had been hospitalized 6 or more months. Many of these reflected the mild malnutrition often seen in mental patients.

In Table 7, the incidence of leukopenia is roughly doubled during chlorpromazine treatment. Leukopenia, from 2,000 to 3,000 white blood cells per cu. mm., occurred during therapy in 4 patients. Counts below 2,000 cells, with marked neutropenia, developed in 2 of 1,215 treated cases. In the 18-months' study, one additional case of leukopenia with less than 2,000 cells was incidental to jaundice (Case 2—Table 4). Thus, pronounced leukopenia was seen in only 3 of 3,014 treated. The leukocyte count returned to normal within a month after stopping medication, following simple supportive therapy.

No instance of drug-induced leukocytic depression appeared after the third month. Serial leukocyte counts were considered essential in these first 3 or 4 months since the onset of leukopenia was insidious. Eosinophilia up to 6% was present in less than 25 cases and was commonly associated with skin rashes.

CONCLUSIONS

1. There were 3,014 cases admitted to treatment with chlorpromazine in doses of 200 to 400 mgm. daily during an 18-month period beginning January, 1955.

2. Response to treatment was best in agitated states of most mental disease categories. It was poorest in akinetic states with a good proportion showing a deepening of their depression. Side-effects were infrequent and not serious, appearing in the first 2 weeks and often subsiding on continued therapy. There were no permanent sequelae even after more than 18 months of medication.

3. Jaundice occurred in 13 patients, an incidence of .43%. No relation was found

between the jaundice and amount or duration of dosage.

4. Leukopenia below 2,000 white blood cells cu. mm. was found in 3 patients (.11%) all of whom recovered on withdrawal of treatment.

5. Serial tests for total serum bilirubin, serum alkaline phosphatase plus complete blood cell counts were done on 1,215 cases. These periodic checks may have helped in maintaining a low incidence of toxic complications by sustaining clinical alertness.

6. During chlorpromazine therapy, the serum alkaline phosphatase rose more frequently than did the total serum bilirubin. Only one-fifth of the cases with alkaline phosphatase values over 8 units were jaundiced, a weak positive correlation.

7. Serial serum bilirubin and leukocyte counts during the first 4 months are useful in detecting the onset of toxic jaundice and/or leukopenia.

ADDENDUM

Two months and 320 treated cases after the close of the above period of survey, the first fatality occurred. This was a fulminating agranulocytosis in the 7th week of treatment.

A.T., a white female aged 50, with a psychosis due to epilepsy, had been on dilantin therapy since 1941. Chlorpromazine, 300 mgm. daily, was added beginning August 17, 1956. The pretreatment blood count and serum bilirubin were normal. On the 35th day on chlorpromazine, the leukocytes were 5,700/cu.mm. with 64% neutrophils, serum bilirubin .25 mgm./% and serum alkaline phosphatase 7.25 units (Goldenberg). On October 8, the 53rd day of medication, she suddenly showed a fever of 104° with pharyngitis, submaxillary lymphadenitis and mild jaundice. A blood count revealed only 450 leukocytes with no granulocytes. The total serum bilirubin was 9 mgms., the phosphatase 7.44 units. With antibiotics and supportive therapy, there was some improvement in the last 2 days. A repeat blood count on October 11, 1956 disclosed 825 white

cells with no granulocytes. The patient died 12, 57 days after beginning chlorpromazine therapy. Autopsy findings confirmed the diagnosis of agranulocytosis.

As 443 new patients had been admitted to chlorpromazine therapy from July to September 1956, this is the only death implicating chlorpromazine among 3,457 patients treated from January 1, 1955.

The consistent cooperation of Dr. J. Hetherly Haight, Clinical Director, is gratefully acknowledged.

BIBLIOGRAPHY

1. Winkelman, N. W. *J.A.M.A.*, **155**: 18-21, May 1954.
2. Denber, H. C., and Bird, E. G. *Am. J. Psychiatry*, **112**: 465, Dec. 1955.
3. (a) Zatushni, J., and Miller, G. *New England J. Med.*, **251**: 1003, Dec. 16, 1954. (b) Loftus, L. R., Benzenga, K. A., Stauffer, M. H., Rome, H. P., and Cain, J. C. *J.A.M.A.*, **157**: 1286, Apr. 9, 1954.
4. (a) Stein, A. A., and Wright, A. W. *J.A.M.A.*, **161**: 508, June 9, 1956.
5. (a) Boardman, R. H. Fatal Case of Toxic Hepatitis Implicating Chlorpromazine. *B.M.J.*, **2**: 572, 1954. (b) Deschamps, A. *Presse Med.* **60**: 944, June 21, 1952.
6. (a) Denber, H. C. B. Correspondence, *J.A.M.A.*, **158**: 586, June 18, 1955. (b) Kinross-Wright, V. *Dis. of the Nerv. System*, **16**: 1, Apr. 1955.
7. Goldman, D. *J.A.M.A.*, **157**: 1274, April 9, 1955.
8. Hoch, P. H., Malitz, S., and Lesse, S. *Am. J. Psychiat.*, **113**: 540, Dec. 1956.
9. Winkelman, N. W. *Am. J. Psychiat.*, **113**: 961, May 1957.
10. (a) Cohen, I. M. *Am. J. Psychiat.*, **113**: 115, 1956. (b) Goldenberg, H. *Arch. of Biochem. & Biophysics*, in press, 1958. (c) Goldenberg, H. *Analytic Chem.*, **28**: 1003, 1956.
11. (a) Cares, R. M. and Newman, B. Statistical Conclusions on Serum Bilirubin and Serum Alkaline Phosphatase Levels During Chlorpromazine Therapy. *Proceed. N. Y. S. Assn. Pub. Health Labs.*, **36**, #2, 32 (Nov.), 1956. (b) Ibid. The Significance of Serum Bilirubin and Serum Alkaline Phosphatase Tests in 1,215 Patients. *J. Mt. Sinai Hosp. (Dr. Paul Klemperer Anniv. Vol.)*, **24** (Nov.), 1957 (in press).
12. Lindsay, S., and Skahan, R. *A.M.A. Arch. Path.*, **62**: 84, 1956.
13. Cohen, I. M., and Archer, J. D. *J.A.M.A.*, **159**: 99, Sept. 10, 1955.
14. Stacey, C. H., Azima, H., Huestis, D. W., Howlett, J. G., and Hoffman, M. M. *Canad. M.A.J.*, **73**: 386, Sept. 1, 1955.
15. Lemire, R. E., and Mitchell, R. A. *J. Lab. & Clin. Med.*, **44**: 825, 1954.
16. Goldenberg, H. Personal Communication to authors.
17. (a) Boleman, A. P. Correspondence, *J.A.M.A.*, **157**: 364, Jan. 22, 1955. (b) Prokopowycz, V. Correspondence, *J.A.M.A.*, **157**: 1042, Mar. 19, 1955.

THE ANTIDOTAL ACTION OF SODIUM SUCCINATE IN THE MESCALINE PSYCHOSIS¹

IAN STEVENSON, M. D.,² AND ANDREW J. SANCHEZ, JR., M. D.³

The study of the experimental psychoses has already advanced our understanding of psychopathology. The exact relevance of the experimental psychoses to the problems of naturally occurring psychoses, such as schizophrenia, remains unclear. Nevertheless these two types of states have enough psychopathology in common to warrant much further research. The antidotes to the experimental psychoses deserve attention because of the understanding which they may give of the mode of action of the hallucinogenic drugs, and because of their possible eventual relevance to the biochemical treatment of natural psychoses.

Previous authors have described studies of several antidotes to the experimental psychoses. Thus nicotinic acid has some antidotal action in the lysergic acid diethylamide psychosis(1); chlorpromazine(2, 3) and sodium amytal(4) have some antidotal action in the mescaline psychosis; Frenkel has some antidotal action on both the lysergic acid diethylamide psychosis and the mescaline psychosis(5).

Quastel and Wheatley(6) demonstrated that the barbiturates and certain other narcotic amines, including mescaline, do not inhibit the oxidation of succinate as they do that of glucose, lactate and pyruvate. This led to the use of sodium succinate in antagonizing barbiturate anesthesia and poisoning in animals(7, 8, 9) and man (7, 10, 11). Schueler(12) repeated and confirmed the *in vitro* experiments of Quastel and Wheatley mentioned above. He then conducted four experiments on human subjects in whom he demonstrated a definite antidotal effect of sodium succinate on the symptoms of the

mescaline intoxication. We report in this article a series of experiments which have repeated and somewhat extended Schueler's observations.

METHOD

Subjects.—The 12 subjects were volunteers drawn from the staff of the department of psychiatry and neurology of the Louisiana State University School of Medicine and from the medical students of the School of Medicine. All were in good health physically and between the ages of 20 and 35. Ten were men and two were women.

Procedure.—Each subject was given 400 mgm. mescaline sulfate orally on two different days. The interval between experiments varied from a week to several months. Two observers studied the subjects and made notes of their behavior including verbal productions throughout the entire period of the effects of the drug until the effects were judged to have worn off sufficiently for the subjects to leave the experimental room and return home. This period usually varied from 8 to 10 hours, rarely longer. On one of the two experimental days each subject was given an injection of sodium succinate intravenously. A 30% solution (Brewer) was used. The dose of sodium succinate varied from 10 grams in one subject to 39 grams in another. Most subjects received 12 to 18 grams. The sodium succinate was administered slowly over periods of 30 to 90 minutes.

RESULTS

Effects of Mescaline.—The observed effects of mescaline on our subjects did not differ from those reported by other authors and are well enough known not to need repeating here. We shall add only that our subjects showed a wide variety of reactions to the mescaline, a fact to which little attention has so far been paid. Moreover, individual subjects showed different reactions on

¹ Aided in part by a grant from the Scottish Rite Committee on Research in Dementia Praecox, National Association for Mental Health.

² Address: Dept. of Psychiatry and Neurology, School of Medicine, University of Virginia, Charlottesville, Va.

³ Department of Psychiatry and Neurology, Louisiana State University School of Medicine, New Orleans, La.

different days. Our current work studies these differences further in a project combining psychological and biochemical techniques. We hope to clarify some of the factors responsible for the marked differences in reactions between different subjects. We mention this here because we observed an equally great diversity of response to the injection of sodium succinate.

Immediate Antidotal Action of Sodium Succinate.—We observed some antidotal action of sodium succinate in each of our subjects. However, the action varied rather widely and ranged from a slight antagonistic action to an almost complete erasure of the effects of the mescaline. The subjects themselves noticed the effects of the sodium succinate injections more rapidly and more markedly than the observers. They would often comment on the change spontaneously. Typical comments after receiving the sodium succinate were the following: "Things seem more normal. The colors are drab," "I feel like I am coming out of it. I feel definitely clearer," "Things seem much more real now. The walls don't move any more," "The color which was associated with the shapes left." The subjects noticed changes especially in their visual perceptions and in their moods. However, other aspects of the mescaline intoxication, such as ability to concentrate and "the sense of reality" were also affected by the succinate. The observers watching the subjects also noticed changes in their behavior, often within a few minutes after they received the succinate. They usually became much less expansive and less talkative. This effect merged with the fatigue induced by the sodium succinate (discussed further below), so that the subjects frequently became sleepy after the succinate injection.

Duration of the Antagonistic Effect of Sodium Succinate.—In some of the subjects the effects of the sodium succinate antagonism wore off within an hour or two and this led to a return of the mescaline effects. A second injection of sodium succinate repeated the earlier effect, but again, after another interval, the mescaline effects might return once more. Such relapses into the mescaline effects were always milder than the original experience before the sodium succinate, but

they were nevertheless quite definite. The following extracts from one protocol exemplify this sequence:

Subject J.B., white male, aged 24.

- 7:00 a.m.... Took 400 mgm. mescaline orally.
- 8:00 a.m.... Tense and slightly elated. Nausea.
- 8:30 a.m.... Disturbances of depth perception. Increased imagery. Color illusions.
- 9:30 a.m.... Mood elated; talkative. Marked disturbance of time sense.
- 10:30 a.m.... Disturbances of body image as well as of space and time perceptions. Feelings of unreality. Difficulty in thinking.
- 11:30 a.m.... Continuing with the same symptoms. Given 24.0 grams sodium succinate intravenously.
- 12:00 p.m.... Quieter; less talkative. Says he is not nearly as elated as he was an hour ago. Nausea and vomiting.
- 12:30 p.m.... Still some residual symptoms of perceptual distortions.
- 12:50 p.m.... Thinks he is about his normal self now.
- 2:00 p.m.... Symptoms have begun to return. Feelings of unreality have returned. Experiences himself as if in a dream. Perceptual distortions returning. Somewhat depressed in mood.
- 3:00 p.m.... Symptoms continue about the same.
- 4:30 p.m.... Persistent feelings of unreality. His speech somewhat unclear and his voice mumbles.
- 5:00 p.m.... Is withdrawn from others in the room. Does not want to answer questions. Having synesthesiae (seeing voices).
- 5:30 p.m.... Given a further 6.0 grams of sodium succinate intravenously.
- 5:50 p.m.... Greatly increased sense of reality. Sensations of warmth in body and some nausea.
- 6:00 p.m.... Seems recovered sufficiently to be taken home. However, on the way home preoccupied with minute details. Focuses attention on some small object for a long time. Talkative and seems to want much reassurance.
- 8:00 p.m.... Persistent feelings of unreality gradually wearing off again.

Figure 1 illustrates diagrammatically the antagonistic effect of the sodium succinate injections with the return of mescaline effects afterwards.

Total Duration of Mescaline Effects With and Without Sodium Succinate.—We attempted to estimate the end-point of the mescaline effects on days when the subjects

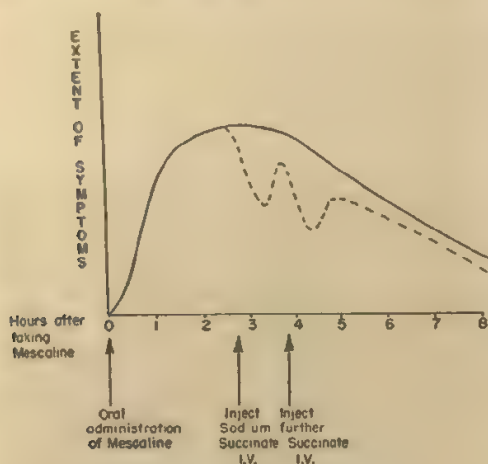


FIG. 1.—Diagrammatic representation of the course of mescaline intoxication with (dotted line) and without (unbroken line) the administration of sodium succinate. The figure illustrates the interference of the mescaline effects by the succinate, the return of the mescaline effects afterwards and the comparatively slight effect of the succinate on the total duration of the intoxication.

received sodium succinate and on days when they did not. This was easier to plan than to accomplish. The mescaline psychosis has no clear end-point. In our experience the psychosis evolves and declines approximately as follows. With oral administration there is a period of gradual onset lasting usually an hour to an hour and a half. There is then a period of maximal effects lasting an hour to an hour and a half. Following this the effects decline at first rather rapidly, but then much more slowly. This last period of some residual effects may last from 6 to 12 hours or longer. Several of our subjects noticed some (usually minor) effects for several days afterwards. One had a marked relapse after an interval of a day in which he was apparently normal. This gradual tapering of the effects makes impossible the assignment of a definite time for the end of the intoxication. It seemed easier to say when 80% of the effects had worn off than to say when they had worn off entirely; so we attempted to observe the time when the subjects, although not entirely normal, had largely emerged from the effects of the drug.

Having emphasized these limitations to our comparisons, we can present the following figures. As already mentioned, we con-

ducted 12 experiments without the administration of sodium succinate and 12 (on the same subjects) with its administration. The average duration of the effects (the end-point being taken when it was judged that 80% of the effects had gone) with the succinate was 9.1 hours and without the succinate was 9.8 hours. In 3 subjects the mescaline effects lasted longer with the succinate than without; in 2 subjects the effects lasted the same length of time with and without the succinate; in the remaining 7 subjects the effects lasted a shorter time with the succinate than without. These figures, and they must be considered approximate only, make clear that the succinate effect, definite as it was, did not appreciably shorten the total duration of the mescaline effects.

Incidental Effects of Succinate.—In addition to the antidotal effects of succinate we noticed other effects of this drug which have been described by other observers. The subjects sometimes complained of some pain in the arm of injection, especially if the injection was made rapidly which was usually not the case. They also exhibited marked flushing of the face and later of the neck and the extremities, especially the hands and feet. They usually felt warm, often sweated considerably, and were sometimes nauseated. (Mescaline also sometimes nauseated the subjects.) Respirations were usually increased and the subjects sometimes coughed and complained of an unpleasant salty taste. Almost invariably they experienced a strong sense of fatigue after the succinate injections. Again, mescaline alone frequently brought a sense of fatigue, but the succinate added greatly to this. The subjects often compared this symptom to their sensations after long walks, many sets of tennis, or heavy gardening. The combination of these symptoms frequently brought mild to moderate discomfort and sometimes some anxiety to the subjects.

Variations in the Antidotal Effect of Sodium Succinate.—As mentioned above, sodium succinate had some antidotal effects on each subject; the magnitude and duration of this effect varied considerably, as did the effects of the mescaline. The antidotal effect was not closely related to the size of the dose administered. For example, one of the most

marked antidotal effects occurred in a subject who was given 10 grams of sodium succinate. This amount in this subject produced a greater antidotal effect than that produced in the subject given the largest amount of succinate, 39 grams.

The variations in the antidotal effect of succinate did not appear correlated with the magnitude of the mescaline effect. Some subjects who were among those having the more marked effects from the mescaline did not show less response to the succinate than others who had milder effects from the mescaline. However, 2 subjects with marked effects from the mescaline stated that the injection of the succinate made their experience worse, that is, less pleasant. It seemed as if for these subjects the antidote only partially antagonized the mescaline effect. It deprived them of the mood elevating effect of the mescaline without entirely returning the perceptions and thought processes to normal. Other subjects found the side-effects of the succinate less pleasant than the euphoria which it interrupted. But although they felt worse after the succinate, we did not consider this a worsening of the mescaline intoxication. It was rather an incidental aspect of improvement.

Variations in the succinate effect were apparently not due to different rates of oxidizing and excreting the succinate. These variations were observed rather soon (*i.e.*, within 10 to 30 minutes) after the injection of the succinate and presumably before there had been time for much disposition of the succinate to have taken place.

DISCUSSION

The foregoing results confirm and add to Schueler's observation that sodium succinate has an antidotal effect on the mescaline psychosis. The mechanism of this effect remains unelucidated and is the object of further study in this department as is the wide diversity of responses both to mescaline and to succinate in different subjects. Two explanations which have been suggested to us to account for the effect of succinate we believe do not apply. The first is that the succinate acts as a stressor to the organism and in a sense "shocks" the patient out of his psy-

chosis. It is true that strong and even mild stimuli such as talking to the subjects tend to break up some of the symptoms of the mescaline effect. The subjects almost invariably report that they feel different and that "things seem more real and less dream-like" when someone is talking to them. And conversely, when they are left alone for a time or when they close their eyes, they tend to drift off into reveries if not actual dreams. It is also true that the succinate induces some associated unpleasant physical symptoms to which we have alluded above. However, we do not believe that these symptoms acting as stressful stimuli account for the antidotal effect. We observed an antidotal effect in subjects who experienced little of the kind of discomfort we have described. And in other subjects some of the antidotal effect was observed before the subjects experienced any significant discomfort. We have also considered a second suggestion that the antidotal effect of succinate derives from its alkalinizing action. We have attempted to test this hypothesis in studies to be reported later. In this place we shall say only that these studies fail to support this hypothesis.

At present, therefore, we believe the most plausible hypothesis of the antidotal action of succinate is that of Quastel and Wheatley and of Schueler. This is that the succinate provides a substrate for oxidation in brain tissues when the oxidation of glucose, lactate and pyruvate has been depressed by the mescaline. Further confirmation of this hypothesis will contribute to our knowledge of the mode of action of mescaline and allied drugs.

We have considered the relevance of these studies to schizophrenia. Osmond and Smythies proposed that the symptoms of schizophrenia are produced by the action of a substance similar to mescaline produced within the body during stress (13, 14). Such a substance could be a derivative of epinephrine or a by-product of its production. If such a substance acts through depressing oxidation in the central nervous system as mescaline appears to do, then succinate might be expected to antagonize it. Succinate has already been used in a small number of cases of mental disorder (15, 16) and beneficial effects reported. We plan to expand the

present studies to include observations of the effects of succinate on various patients of the group of schizophrenias.

SUMMARY AND CONCLUSIONS

1. Sodium succinate was found to have a definite antidotal effect on the mescaline psychosis in each of 12 subjects.

2. The effect varied greatly in different subjects. Moreover, the effect was rather transient and there was little shortening of the total duration of mescaline effect.

3. The most plausible hypothesis of the succinate effect is that succinate provides a substrate for oxidation in the brain tissues when the oxidation of other substrates, *e.g.*, glucose, lactate and pyruvate has been depressed by the mescaline.

BIBLIOGRAPHY

1. Agnew, N., and Hoffer, A.: *J. Ment. Sci.*, **101**: 12, 1955.

2. Denber, H. C. B., and Merlis, S.: *Psychiat. Quart.*, **28**: 635, 1954.
3. Schwarz, B. E., Blackford, R. G., and Rome, H. P.: *Proc. Staff Meet. Mayo Clin.*, **30**: 407, 1955.
4. Hoch, P. H., Cattell, J. P., and Pennes, H. H.: *Am. J. Psychiat.*, **108**: 579, 1952.
5. Fabing, H. D.: *Neurology*, **5**: 319, 1955.
6. Quastel, J. H., and Wheatley, A. H. M.: *Biochem. J.*, **27**: 1609, 1933.
7. Soskin, S., and Taubenhaus, M.: *J. Pharmac. & Exper. Therap.*, **78**: 49, 1943.
8. Beyer, K. H., and Latven, A. R.: *J. Pharmac. & Exper. Therap.*, **81**: 203, 1944.
9. Pinschmidt, N. W., Ransay, H., and Haag, H. B.: *J. Pharmac. & Exper. Therap.*, **83**: 45, 1945.
10. Campbell, C. J., Maes, J. P., and Barrett, R. H.: *Fed. Proc., Part II*, **5**: 15, 1946.
11. Barrett, R. H.: *Anesth. and Analg.*, **26**: 74 and 105, 1947.
12. Schueler, F. W.: *J. Lab. & Clin. Med.*, **33**: 1297, 1948.
13. Osmond, H., and Smythies, J.: *J. Ment. Sci.*, **98**: 309, 1952.
14. Hoffer, A., Osmond, H., and Smythies, J.: *J. Ment. Sci.*, **100**: 29, 1954.
15. Gershon, S., and Trautner, E. G.: *Med. J. Australia*, **2**: 291, 1954.
16. Burrell, R. H.: *New Zealand Med. J.*, **45**: 565, 1955.

THE PLACE OF RESERPINE IN THE TREATMENT OF THE CHRONIC PSYCHOTIC PATIENT

CHARLES P. GORE, M.D.,¹ GEORGE P. EGAN, M.D., AND
DONALD WALTON, B.A.

In the past few years a stream of reports concerning the use of reserpine in psychiatry has appeared. Remarkably favourable claims for its ameliorative effect on the behaviour of grossly disturbed psychotic patients have been made, and astonishing successes described. Although our study covers much well traversed ground we are publishing our results because they are at variance with, and much more conservative than, the findings of many similar studies. This report is divided into Part I, a controlled study and Part II, an uncontrolled study.

PART I

CLINICAL MATERIAL

The material was made up of 20 female patients suffering from chronic and intractable schizophrenia who were selected not on diagnostic grounds but because they were regarded by the nursing staff, who largely made the selection, as presenting exceptionally difficult nursing problems. Fifteen showed behaviour characterized by restlessness, overactivity, noisiness, and a tendency to strike out if carelessly or tactlessly handled. The other five were predominantly withdrawn, self-absorbed, difficult if not impossible to occupy, and required supervision with feeding and dressing. Five patients were incontinent, 2 persistently, 3 occasionally. Their age range was from 31 to 62 years with a mean of 45.9 years. Their duration of hospitalisation ranged from 2 to 29 years with a mean of 13.4 years.

Independently of, and prior to this trial 10 patients, because of their grossly disturbed behaviour, had been recommended for leucotomy by a majority of the clinical staff of the hospital. Eleven were on regular heavy sedation, mainly barbiturates, throughout the day, the others as dictated by changes in their behavior. Eleven had received either

electroshock or insulin coma therapy, at some time during their stay in hospital, without improvement.

METHOD OF INVESTIGATION

Before entering the trial all sedation was withdrawn. For an initial period of 4 weeks each patient was studied in order to establish a base line for her behaviour, blood pressure, pulse rate, and weight, and to note any variation which might otherwise have been attributed to the drug. Then a placebo, indistinguishable by patients and staff from reserpine, was given to 10 of the patients, the active preparation, reserpine, being administered to the other 10. After 3 weeks, placebo and drug were alternated, and this substitution was maintained for 3 weeks. Therefore, each patient acted as her own control, and at any one given time, half the patients were receiving the inert tablets, the other half the active preparation.

At the time the trial was undertaken there was no indication in the literature as to the effective dosage of the drug. Dosage was therefore, a matter of trial and error. Administration was begun with 1 mgm. b.d., this was increased to 1 mgm. t.i.d. after a week and for the third and final week, 1 mgm. q.i.d. was given. In 2 patients, this dosage led to marked cardiovascular changes, and could not be maintained. Tablets were prescribed according to the hospital record number, only one of us (C.G.) and the hospital pharmacist knew whether a patient was on the active or inert preparation.

Three times a week the mental state of each patient was systematically assessed by one of us (G.P.E.) by ordinary clinical methods combined with the use of a modified version of the Worcester Rating Scale (4). The day nursing staff made daily notes, and in addition rated each patient on an adapted version of the Johns Hopkins Hospital Behaviour Chart (6). The night staff noted the hours of sleep, and any dis-

¹ Menston Hospital, Nr. Leeds, Yorkshire, England

turbed behaviour at night. All information thus obtained was taken into account in determining whether any change had occurred in the patient's mental state. Weights were recorded weekly, the blood pressure thrice weekly, the pulse rate morning and evening.

FINDINGS

Mental.—Patients who had their customary sedation withdrawn showed a shortlived temporary exacerbation of symptoms following which they reverted to their former patterns of behaviour. During the initial period of observation it appeared in a general way that all were slightly better. This slight improvement was attributed to the increased interest taken by the nursing and medical staff in the patients.

In 16 patients no change due to the drug was observed. Four showed slight but definite improvement. This was attributed to the drug as it did not occur during the preliminary period of observation, nor when the placebo was exhibited, also the change was not maintained subsequent to the withdrawal of the drug, nor following the substitution of the drug by placebo. No patient improved whilst on placebo. The change in 3 patients was a damping down of their former restless, overactive and noisy behaviour. One patient who had previously been mute, and whose only activity was to continually tear her clothing and pull her hair out, ceased to indulge in these activities, become responsive, replied to questions, made spontaneous conversation and took an increased interest in her surroundings. No fundamental change in the basic illness occurred, improvement being entirely symptomatic.

Physical.—Weight: Despite improved appetite as indicated by increased food consumption, no significant changes in weight occurred. Those which were recorded could be attributed to chance variation, and not necessarily to the influence of reserpine. It is possible that the absence of significant weight change may, in part at least, be a function of the short time interval covered by this investigation.

Cardiovascular: The cardiovascular changes are summarised in Tables 1 and 2. The patients have been divided into two

TABLE 1

GROUP A MEAN AGE: 49.9

	No drug	Reserpine	Placebo	Degree of significance
Mean systolic . .	139.8	117.1	111.8	F. ratio 3.29*
Mean diastolic . .	90.6	75.3	75.6	F. ratio 2.18 not significant
Mean plus rate . .	76.7	64.9	68.1	F. ratio 23.10†

* Significant approx. .05 level of confidence.

† Significant beyond .01 level of confidence.

groups, A and B, depending on whether they received first the inert or active preparation.

The systolic changes: There is a tendency for reserpine to reduce the systolic pressures in both groups. Both groups show changes in the same direction and both are almost at the same level of significance. The effect of reserpine is significantly greater than the effect of the placebo, the value of *t*, the critical ratio, being 6.5, significant beyond the 0.01 level of confidence. The rank correlation between initial systolic level and the size of the subsequent drop under reserpine is significant beyond the .01 level of confidence (+.77). Those in this sample with the largest systolic blood pressure, tend to show the largest falls.

Diastolic changes: Group A with the higher mean diastolic pressure, does not show any significant change under reserpine. Group B, with a lower group mean diastolic shows a very significant drop. A statistical explanation of this difference can be gained from an examination of the size of the mean diastolic pressures of the two groups. Whilst there is approximately a 15 points drop for groups A and B, a drop of 15 in Group B

TABLE 2

GROUP B MEAN AGE: 41.9

	No drug	Placebo	Reserpine	Degree of significance
Mean systolic . .	111.3	105.3	92.3	F. ratio 3.02*
Mean diastolic . .	76.2	73.1	60.6	F. ratio 6.80†
Mean plus rate . .	77.3	77.9	70.9	F. ratio 7.45†

* Significant approx. .05 level of confidence.

† Significant beyond .01 level of confidence.

is proportionately greater than a drop of 15 in Group A.

One possible physiological explanation of these changes can be postulated from the two rank correlations calculated:

(a) Between diastolic level and subsequent drop.

(b) Between the size of diastolic drop and age of the subject. They were +.29 and +.37 respectively. Neither is significant. It is suggested that the older subjects showing the largest diastolic pressures (Group A, mean ages: 49.9, Group B, mean age: 41.9) are less likely to show any significant reduction, whilst the younger subjects with less functional resistance and lower diastolics, are more likely to do so. In the older age groups one is, therefore, perhaps less able to predict with accuracy that a fall in diastolic pressure will take place after exhibition of reserpine. In the younger group, with these chance factors minimised, prediction would appear more accurate and certain.

The value of *t* calculated for the significance of the difference of the changes effected by reserpine and placebo is 5.6. This is significant beyond the .01 level of confidence and shows that the reduction in diastolic pressure by reserpine is significantly greater than that effected by suggestibility, increased medical care, etc. during the administration of the placebo.

Pulse Changes: In Groups A and B the pulse rate dropped very significantly. There can be little doubt that this is attributable to the direct effect of the drug. In Group A when reserpine was withdrawn and the placebo given in its place, the pulse rate rose from a group mean of 64.9 to 68.1. Similarly in Group B, under the effect of the placebo the mean pulse rate remained approximately constant at the "no drug" level. After the introduction of reserpine the mean pulse rate fell from 77.9 to 70.9.

Incontinence: No change.

Side-Effects: Sudden and alarming bradycardia was observed in one patient. This was noted on the fourth morning of the trial, by which time she had received 6 mgms. of reserpine. Her pulse rate, which had constantly centred around the 70 mark fell to 38. At this stage she looked pale and ill. An attack of generalised bodily tremor last-

ing about 10 minutes was observed by the nursing staff. She stated that she felt sick and that she was too ill to shout or move about. Prior to this her behaviour was described as overactive, restless and noisy. She would spend most of the day shouting out of windows about atomic rays. The dose of reserpine was reduced to $\frac{1}{2}$ mgm. b.d. and it was not found possible subsequently to exceed $\frac{1}{2}$ mgm. t.d.s. without marked bradycardia. As soon as her pulse rate reached 50, there was a return to her very disturbed behaviour.

In another patient, it was not found possible to exceed a dose of 1 mgm. t.d.s. without causing a similar bradycardia. A physically healthy 32-year-old man (not included in this series), suffering from a crippling obsessional illness associated with considerable tension, developed a marked bradycardia—pulse rate 40, and a fall in blood pressure from 110/70 to 50/40, on a dose of 4 mgms. daily. He described a marked diminution of tension, this because he felt drained of all energy. Like the patient in this series, he looked pale and ill.

Drowsiness was observed in 6 patients. This was noticed on the third or fourth day. It was never troublesome, and passed off in 2 or 3 days without a reduction in the dosage of the drug.

No other side effects were recorded. This does not mean they did not occur but may merely be a reflection of the failure of such patients to report departure from their customary feeling state.

PART II

MATERIAL AND METHOD

This part of the study covers all cases at the hospital (43) treated with reserpine. Of these 9 had to be excluded because of inadequate dosage or too short a period of treatment. The remaining 34 (13 female, 21 male) had been diagnosed as suffering from schizophrenia, and were regarded as incurable. They had been selected on the grounds of the chronicity and intractability of their illness, and also because of their tendency to be a greater nursing problem than other patients either by virtue of overactivity or withdrawal. Their age range was from 22

to 67 years with a mean of 40.6 years. Their duration of hospitalisation ranged from 1 to 37 years with a mean of 9.4 years.

Twenty-seven had previously been treated with electroshock and/or insulin coma therapy, 8 had been subjected to prefrontal leucotomy, and most had been and were still on large doses of barbiturates. Some had received more than one form of physical treatment *e.g.*, ECT, and PFL.

The average daily dose of reserpine was from 3 to 6 mgms. and all cases had been treated for at least 12 weeks, 15 for more than 6 months. The response to the drug was estimated on the basis of 1. Interview with the patient; 2. Discussion with the doctor and nurse caring for the patient; 3. The progress notes recorded in the patient's file.

FINDINGS

Twenty-one patients showed no change. Four were regarded as slightly worse. In general they were considered to be lazier, more lethargic and dirtier, less concerned about their personal appearance, or somewhat noisier. One patient was assessed as much improved. This indicated a major change in behaviour permitting him to be on ground parole and to go home at weekends. Whether this can be wholly ascribed to the drug is doubtful since a review of his record showed that similar improvements had spontaneously occurred in the past. Eight patients were slightly improved. These patients were described as being less restless, more composed, tidier and more consistent at their work tasks. None had undergone a major change. In all cases improvement was entirely symptomatic, and there was no modification of the basic illness.

There was no correlation between improvement, dosage and duration of treatment. Improvement tended to occur within the first 3 weeks and to be maintained. A turbulent phase was not observed.

DISCUSSION

It is worthwhile emphasising that the withdrawal of sedation, although given in large doses, and over long periods to control disturbed behaviour, led only to temporary

short-lived exacerbation of symptoms. It is our impression that patients from whom barbiturate drugs were withdrawn showed slight improvement when free from the toxic effect of these drugs. When sedative drugs have been prescribed for whatever reason, there seems to be a tendency at least in mental hospitals, for successive doctors automatically to repeat the prescription. Our experience indicates that such use of sedatives is to be deprecated, and that they are no substitute for good nursing and medical care.

Only 13 patients (4 in Part I, 9 in Part II) showed improvement. This somewhat disappointing result may indicate that reserpine is only of very limited value in the treatment of chronic psychotic reactions, and since the improvement was entirely symptomatic it seems reasonable to conclude that the drug has no effect on the disease process itself, and that its only action is to lessen the intensity of symptoms. Furthermore it is difficult to decide if the symptoms which it improves are due to the disease *per se*. It seems to us that its main effect is on the symptoms which arise as a direct result of the conditions which are imposed on psychotic patients, *i.e.*, overcrowded and locked wards. Disturbed patterns of behaviour would, we suggest, undoubtedly occur in 'normal' people under similar conditions. In short, we are not convinced that reserpine or any other drug currently available can take the place of an enlightened approach to the care of these patients. As our findings are much more conservative than the majority of reports published particularly in America (7, 8, 3), it could be argued that the relatively poor results obtained in this study were a function of the methods employed. We do not believe this can be sustained. Since marked physiological changes occurred in the patients in Part I we conclude that dosages of 3-6 mgms. are sufficient for the drug to produce its effect, and that consequently higher doses are not justified. Furthermore the exhibition of the drug for periods of 12 weeks and more as in Part II is adequate to allow the physiological changes induced by the drug to reach a maximum. If the patient is not showing an improvement after 12 weeks the drug should be withdrawn.

The difference between results obtained in

America and our findings may possibly be a reflection of a differing approach to the care of chronic psychotic patients. Mental hospitals in this country are smaller, and whilst locked and overcrowded wards exist, "maximum security" wards are unknown, and there is a growing tendency to abolish all locked wards. This has been successfully done in some British mental hospitals. Bell (1) has shown that the unlocking of wards produces results as gratifying and dramatic as those attributed to reserpine (7, 8, 3). This tends to confirm our impression that reserpine's greatest effect is on the symptoms which are the result of environmental conditions imposed on the patients. Sergeant (10) is of the opinion that fewer reports of good results from chlorpromazine and reserpine are to be expected in Great Britain than in the U.S.A. and France, because of a putative higher standard of care in Great Britain. Clearly this is impossible to confirm as the necessary information is beyond our knowledge.

On the basis of our findings it seems to us that reserpine is in no way curative, and has only a limited role to play in psychiatry. Nor should it be overlooked that it is a dangerous drug and may cause depression of suicidal intensity (4), and even cardiac failure due to water retention though given in small doses (5). The sequence of events following the introduction of a new drug is well described in the *British Medical Journal* (2). The initial flood of favourable reports dries up and becomes replaced by those of another kind, and what was once a cure-all ends either by falling into disrepute or being regarded as only of limited value. Excessive claims for the efficiency of new drugs whether made by manufacturers or physicians are to be deprecated. It is obviously undesirable for manufacturers to release drugs for general use until they have been subjected to adequate clinical trial preferably by some competent medical research organisation.

The cardiovascular changes (Part I) are of considerable interest. The main points emerging from the findings are the higher

the systolic and the lower the diastolic pressure, the greater the fall attributable to reserpine. This suggests the effect of the drug would be greatest in cases of hypertension in which the rise in systolic pressure is proportionally greater than the rise in diastolic pressure. In well established cases of hypertension with a persistently raised diastolic pressure it seems probable that a reduction in the systolic pressure alone would occur, and the diastolic pressure would remain unaltered.

Cases of choice for treatment with reserpine should on our findings prove to be the early borderline, or "prehypertensive" ones. The findings summarised in Table II indicate that reserpine continues to exert its hypotensive effect for some weeks after its withdrawal. Bradycardia occurred in all patients, and was moderate except in the 2 cases referred to earlier.

SUMMARY

The effect of reserpine on the behaviour of chronic psychotic patients has been investigated by means of a controlled, and an uncontrolled study. The results indicate that it is only of limited value in the treatment of such patients. The extremely favourable results obtained by other workers were not confirmed.

BIBLIOGRAPHY

1. Bell, G. McDonald. *Int. J. Soc. Psychiat.*, 1: 42, 1956.
2. B. M. J. Stimulants and Depressants, 1: 969, 1956.
3. Kline, N. S., and Stanley, A. M. *Ann. N. Y. Acad. Sc.*, 61: 85, 1955.
4. Malamud, W., Hoagland, H., and Kaufman, C. *Psychosom. Med.*, 8: 243, 1946.
5. Marley, E., and Pare, C. M. B. *B.M.J.*, 1: 267, 1956.
6. Muncie, W. *Psychobiology and Psychiatry*, St. Louis: C. V. Mosby Co., 1939.
7. Noce, R. H., Williams, D. B., and Rapaport, W. *J.A.M.A.*, 156: 821, 1954.
8. Noce, R. H., Williams, D. B., and Rapaport, W. *J.A.M.A.*, 158: 11, 1955.
9. Platt, R., and Sears, H. T. N. *Lancet*, 1: 401, 1956.
10. Sergeant, W. S. *B.M.J.*, 1: 939, 1956.

CHRONIC PSYCHOSIS FOLLOWING EPILEPSY¹

J. E. A. BARTLET, M.D.²

INTRODUCTION

The relationship of the chronic psychosis to epilepsy is a controversial subject. Such questions as "Is there a true chronic epileptic psychosis?" "Can epilepsy and schizophrenia or epilepsy and an affective psychosis co-exist?" and if so "How do they affect each other?" and "What is the relationship between epilepsy localised to or commencing in the temporal lobe and the functional psychoses?" are still unanswered. This is what I have attempted to do from the highly selected group of patients attending the Bethlem Royal and Maudsley Hospitals. The results are necessarily tentative, but I consider of sufficient interest to warrant fuller investigation in a larger and less highly selected group of patients.

REVIEW OF LITERATURE

Kraepelin(1) believed that there was a specific form of dementia which was the result of epilepsy and had to be differentiated from dementia praecox. Vorkastner(2) believed that there was a condition of mental deterioration following on epilepsy which sometimes took on a dementia praecox-like colouring. Krapf(3) considered that true schizophrenia does not occur in epileptics, epilepsy does not complicate schizophrenia, but schizophrenia-like symptoms may follow epilepsy. Glaus(4) was of the opinion that true schizophrenia and epilepsy could occur in the same patient as independent conditions. Gruhle(5) considered that cases occur where what appears to be schizophrenia is interwoven with epilepsy and leaves it open as to whether one postulates schizophrenia with secondary symptomatic epilepsy, or idiopathic epilepsy with secondary symptomatic schizophrenia, or an accidental combination of both complaints. He finds no phenomenological difference between the form of primary delusions in schizophrenia and epilepsy.

More recently Alström(6), in his study of 807 unselected patients suffering from epilepsy at the Neurological Clinic of the Caroline Institute at the Serafimer Hospital, found 19 to be suffering from psychosis. They were diagnosed as follows: schizophrenia 7, dementia senilis 6, arteriosclerosis cerebri with psychosis 2, encephalitis lethargica 1 and alcoholic dementia 3. The author considers that this corresponds to what might be expected from a random sample of equal size taken from the general population. This is an important conclusion but loses value when it is remembered that all the cases attended a neurological clinic and were thus automatically a group with a disproportionately slight amount of mental illness. The patients with greater psychiatric disability would be more likely to come under the care of a psychiatrist.

Jones(7) in a comprehensive review of the literature concerning intellectual level, deterioration, specific disabilities and personality in epilepsy comes to the conclusion that there is no satisfactory evidence to support the view that epilepsy *per se* is responsible for intellectual deterioration, nor does he find validation for the classical concept of "the epileptic personality."

Hoch(8) dealing with the relationship between schizophrenia and epilepsy comes to the conclusion that they are two disorders which are not genetically related. His argument, based largely on the work of Conrad in epilepsy and Kallmann in schizophrenia, is as follows:

He takes the general average frequency of epilepsy as between 0.2 and 0.5% and that of schizophrenia as 0.85%. Hence he considers, before one may assume a genetic relationship between the two, there should be (a) an increase in the frequency of epilepsy in the blood relations of schizophrenics and the increase should be proportionate to the degree of consanguinity and (b) a similar increase in the frequency of schizophrenia among blood relations of epileptics. He finds neither condition fulfilled. He finds strong support for his hypothesis

¹ From the Bethlem Royal and Maudsley Hospitals, London, England.

² Consultant Psychiatrist, Park Prewett Hospital, Basingstoke, Hants, England.

ocular twin studies. He quotes Conners of 66.6% concordance rate in twins, (86.3% if restricted to idiopathic epilepsy) and Kallmann's figure of 81.7% concordance rate in schizophrenics, and concludes that no case of epilepsy in the monozygotic co-twin of a schizophrenic nor a case of schizophrenia in the homozygous twin of an epileptic has been reported. It appears from these results that patients with both epilepsy and a schizophrenic illness are so infrequent as not to alter the statistics significantly or that the diagnosis of epilepsy and schizophrenia have been regarded as being mutually exclusive. Of course if one subscribes to Krapf's view, epilepsy does not occur as a complication of schizophrenia but this is not the view held by such authorities as Kalilbaum(9) and Kraepelin(1) and more recently Esser cited by Kalinowsky and Hoch(10).

There is a rapidly enlarging literature on the subject of the relationship between temporal lobe lesions with or without epilepsy and psychiatric disorder. Gibbs(11) reviewing 458 cases with EEG evidence of focal seizure discharge found the anterior temporal region the most vulnerable area of the cortex and that psychiatric disorder was more than three times commoner in cases with focal seizure activity in the temporal lobe than any other cortical area. He found such cases clinically indistinguishable from "purely psychiatric" disorders. He considers that the ictal or psychomotor phenomena accompanied by focal EEG abnormal activity and the non ictal psychiatric abnormalities although not temporally related, are anatomically associated.

Mulder and Daly(12) discuss 100 outpatients who had lesions of the temporal lobe and whose presenting complaints were usually thought to be psychiatric. The lesions were localised on the basis of a complete examination and included 24 tumours in the temporal lobe of the cerebrum, 23 atrophies of the temporal lobe and 53 lesions of the temporal lobe in which the underlying pathological process was obscure. A focus of abnormal electrical activity in one temporal lobe was found in 65 patients. Abnormal electrical activity in both temporal lobes was observed in 10 patients. Diffusely abnormal EEG tracings were seen in 7 patients. Six-

teen patients had normal records. They divide their patients into 2 groups, those with paroxysmal and those with non-paroxysmal symptoms. The latter consisted of 62 patients and are subdivided by the authors into 36 anxiety states, 16 reactive depressions and 20 schizoid disorders. They found only 2 of the schizoid group psychotic and of the whole series only 4 psychotic.

Hill(13), discussing surgery of temporal lobe epilepsy referring to the same clinical material but not with the same selective criteria as myself, is in agreement with Mulder and Daly, and Gibbs regarding the relationship between temporal lobe lesions and psychiatric disorders. He considers there is a greater incidence of personality disorders in those patients in whom the focus is placed posteriorly in the temporal lobe rather than towards the temporal pole. He also quotes Liddell's, at the time of his paper, unpublished work at Runwell Hospital. A temporal lobe EEG focus was found in 50% of his epileptic patients which comprise 4.3% of the hospital population. In 78% of those with temporal lobe foci behavioural automatisms occurred. Hill compares these figures with those given by Jasper, *et al.* (14), for the general epileptic population about 1 in 5 of whom are believed to have temporal lobe origin for their fits. He noted that out of 13 cases of epilepsy with psychosis personally observed, 11 demonstrated a temporal lobe origin for the seizures. Karagulla and Robertson(15) point out the similarity between some of the subjective experiences of temporal lobe epilepsy, spontaneous or electrically induced in patients subject to temporal lobe epilepsy and some schizophrenic symptoms.

Thus in my sampling of the literature on the subject of psychosis and epilepsy we have 5 approaches.

1. The Continental psychiatrists in the tradition of Kraepelin describe a series of cases in which they find features that look like epilepsy and schizophrenia and manipulate the facts in an attempt to fit them into their hypothesis that schizophrenia and epilepsy are disease entities with a specific organic basis.

2. The neurologist investigates statistically the patients attending his clinic and

finds no evidence that epilepsy predisposes to psychosis.

3. The psychologist finds no evidence of epilepsy causing intellectual impairment nor of a specific "epileptic personality."

4. The geneticist finds schizophrenia (and for that matter manic-depressive psychosis) and epilepsy unrelated conditions.

5. Workers with a clinical neurophysiological approach to the problem particularly with an emphasis on EEG studies find evidence to support the hypothesis that paroxysmal temporal lobe dysfunction is related to non-ictal psychiatric disorder.

Meduna's(16) hypothesis that schizophrenia and epilepsy were mutually incompatible conditions does not seem to be standing the test of time, but there appears to be little doubt that psychotic illnesses where there is a large affective element benefit from artificially induced convulsions(17, 10).

THE STUDY

Scope: The case records of all patients with a diagnosis of psychosis following on epilepsy and with the combined diagnoses of epilepsy and psychosis attending the Bethlem Royal Hospital and the Maudsley Hospital between January 1, 1949 and December 31, 1953 have been studied and the cases which satisfy the following criteria selected.

1. The epilepsy antedated the onset of the psychosis.

2. The patient continued to suffer from delusions for a period of at least one year.

This selection was decided upon to exclude (a) any patients with schizophrenia complicated by epileptic seizures and (b) the group of epileptic patients who develop an acute psychosis, typically with disorientation, delusions and hallucinations, which does not become chronic. Glaus(4) and Hill(18) have discussed the former and Cobb(19), Gibbs(11), Mulder and Daly(12) and Hill(13) the latter group.

Definitions and Criteria: For this investigation epilepsy is defined as a sudden alteration in, or loss of, consciousness accompanied by an abnormal paroxysmal discharge of the cortical grey matter. The essential criteria have been clinical; that is, an account by a reliable witness as well as the patient's own account. Electroencephalographic evidence was always present to support the diagnosis.

Clinical and EEG evidence was also used in postulating the commencement of the discharge in a local area of the cerebral cortex.

The psychosis with delusions, in all cases was considered to be of sufficient severity to have caused the patient to come to a psychiatrist irrespective of the epilepsy.

The classification has been as follows:

I. The cases that would have been diagnosed as schizophrenia (mostly "paranoid" due to the prominence of delusions) if no evidence of epilepsy had been present. In this I follow Eugen Bleuler(20) stressing particularly the first two of his fundamental symptoms, i.e., disturbance of affect, particularly incongruity, or perhaps more usefully, inconsistency; (I introduce the idea of "inconsistency" rather than "incongruity" to overcome the difficulty that in a schizophrenic patient there may be undetectable congruity of mood and thought) and disturbance of thought, particularly of association. I also include Goldstein's(21) and Benjamin's(22) criteria of loss of conceptual thought as detected for example on asking the patient to give the meaning of a series of proverbs. Bleuler's third fundamental symptom of predilection for fantasy against reality or "autism" did not prove a useful concept. If delusions and possibly hallucinations were present along with the former 2 symptoms, a subjective evaluation of the patient's preference for reality or fantasy seemed to add nothing further to my assessment, nor was it found valuable in distinguishing such cases from the following group.

II. Cases of gradual onset arising out of an abnormal personality with delusions centered round relatively few primary false beliefs and with some degree of systematisation. Apart from these delusions the patient's thought processes were little disturbed and he was in a relatively normal relationship with his environment. Any disturbance of affect was considered to be secondary to the incapacitating nature of the illness or to the content of the delusions. These I call paranoid reactions.

III. Cases that would have been diagnosed as affective psychoses if no evidence of epilepsy had been present. In these cases there was a marked disturbance of mood, and delusions which were congruous with the dis-

turbance of mood. In this group there was no evidence of inconsistency or incongruity, in Bleuler's sense, of affect, nor involvement of conceptual or associative thought processes.

IV. Cases with unequivocal intellectual impairment, *i.e.*, dementia.

Results: Twelve cases satisfied my original criteria (see appendix). Ten have been examined by me. The eleventh, Case 6, at present in a mental hospital, has been reported on by the physician superintendent. The twelfth, Case 5, could not be traced but was adequately documented, and is included. If the epilepsy were ignored they could be fitted into the following diagnostic categories, by the standards laid down above.

I. Schizophrenics	8
II. Paranoid reactions	0
III. Affective psychosis	3
IV. Dementia	1

DISCUSSION

Eight of the above cases developed a clinical picture that in my opinion if epilepsy had not been present most psychiatrists would have called schizophrenic. In one, case 8, there might have been some difference of opinion as to whether or not he was suffering from a paranoid reaction. At present he does seem to be settling down to a well circumscribed paranoid system, centering round one delusional idea, but I feel it is legitimate to classify it as paranoid schizophrenia. The picture in 3 was predominately affective. One, case 9, was that of a depressive psychosis in a mentally backward patient. The other 2 cases, 10 and 11 are classified as hypomania. They have the features in common that the onset appears to have been in the form of a divine revelation and the delusions and affective abnormality appears to be related to this and a fixed idea that the patient has a mission. The remaining case, 12, is that of an undiagnosed dementing organic state with epilepsy antedating the clinical deterioration.

The population from which the above cases arise is made up as follows: 3,557 admissions (these figures exclude readmissions apart from the period 1.8.1953-31.12.1953), 12,015 outpatients (a number of outpatients subsequently became inpatients).

The number of patients suffering from

epilepsy was considered to be approximately 1,073 for the following reasons: for the period 1949-51 from the records department 223 had been diagnosed epilepsy. The number of patients attending the hospital has been steadily increasing so the figure arrived at by multiplying by 5/3 for correction from the period 1949-51 to the period 1949-53 is almost certainly lower than the correct one. This gives a figure of 373. Approximately 700 patients suffering from epilepsy are still attending the hospital several years after first attendance and are not included in the figures reaching the records department as their cases have not been "closed." (This source of error is excluded in my case material as I was working in the clinic for the epileptics of the hospital for the period 1.4.1953-31.1.1954 and any suitable cases are included.)

It is, therefore, considered justifiable to say that the 8 schizophrenic-like psychoses, 3 affective psychoses and 1 dementia with delusions occurred in a population of approximately 1,073 epileptic patients referred to the hospital.

Thus the incidence of schizophrenic-like conditions by my original criteria has an occurrence rate of approximately 0.75% in the epileptic population of this hospital. Hence I consider there is no evidence to suggest that chronic schizophrenic-like conditions occur more frequently in epileptics in the group investigated than schizophrenics in the general population (taking for example Kallmann's figure of 0.85%).

For the period 1949-53 the patients admitted to the hospital with a schizophrenic or affective illness (without epilepsy) of over 1 year's duration were given diagnoses as follows:

Schizophrenic disorders (dementia praecox) ..	167
Simple type	21
Hebephrenic type	27
Catatonic type	7
Paranoid type	76
Acute schizophrenic reaction	1
Latent schizophrenia	3
Schizo-affective psychosis	14
Other and unspecified	18
Manic-depressive reaction ..	121
Manic and circular	17
Depressive	95
Other	9

(These figures were obtained from the records department.)

Using this diagnostic scheme my 8 schizophrenic-like conditions would have been diagnosed hebephrenic or paranoid schizophrenics, and my 3 affective cases 2 manic and 1 depressive. (I combine hebephrenic and paranoid schizophrenia because of the difficulty in laying down mutually exclusive diagnostic criteria.)

Thus the patients with epilepsy developed 8 paranoid or hebephrenic-like conditions, 1 depressive and 2 manic conditions as compared with 103 paranoid and hebephrenic schizophrenics and 17 manic or circular and 95 depressive affective conditions in the patients with illness of comparable duration without epilepsy.

These figures show no statistically significant difference in their relationships but when taken in conjunction with Alstrom's figures (6), which include no affective breakdown they are suggestive that the relationship between the number of affective illnesses and schizophrenic illnesses in epileptics is less than in the epileptic free population. It also appears that chronic depressive psychoses severe enough to produce delusions are extremely rare in epileptics. There is a suggestion that the classical belief that religious delusions are common in epileptics may be based on a particular clinical pattern as in cases 10 and 11, which automatically grouped themselves in my category of hypomanic affective psychosis, comprising the entire group.

Of the schizophrenic group, 7 out of 8 have clinical and/or EEG evidence suggesting temporal lobe epilepsy and of the affective group 1 out of 3. This when compared with figure of 1 in 5 of the general epileptic population as given by Jasper, *et al.* (14), supports the theory that there is a relationship between psychosis following epilepsy and temporal lobe dysfunction.

The absence of evidence of an altered incidence of schizophrenia or schizophrenic-like condition in epileptic subjects from the general population and the evidence suggesting an increased incidence of temporal lobe epilepsy in the psychotic patients considered, suggests that epilepsy in patients who are liable to schizophrenia tends to manifest itself in the temporal lobe.

SUMMARY AND CONCLUSIONS

From a study of the literature and of the cases suffering from epilepsy which later developed chronic psychoses with delusions, no evidence was found to support either of the hypotheses implicit in earlier writings that schizophrenia occurs more, or less, frequently in epileptics than in the general population, but there was a suggestion that affective psychoses occur less frequently, that depressive psychoses are very rare and that hypomanic psychoses may take a typical form of a divine revelation followed by elation and Messianic delusions. This last category is the only evidence to suggest a typical chronic epileptic psychosis.

No case suffering from a paranoid reaction of sufficient severity to satisfy my original criteria, that could not be classified as affective or schizophrenic, was found.

The high incidence of clinical and/or EEG evidence implicating the temporal lobe, supports the view that psychosis following epilepsy is related to temporal lobe dysfunction.

It is suggested that epilepsy in subjects liable to schizophrenia tends to manifest itself in the temporal lobe.

APPENDIX

THE CASES

I. Schizophrenia

CASE 1.—Mrs. G.L.K. Aged 35 years. Temporal lobe epilepsy, possibly relative to birth trauma, developing a psychosis in the late 20's indistinguishable from schizophrenia with hebephrenic and paranoid features. Coincidental with the development of the psychosis there was disappearance of the epilepsy.

CASE 2.—Miss D.E.L.L. Aged 32 years. Epilepsy, possibly idiopathic, with myoclonic features developing slowly a schizophrenic-like psychosis with a fairly well marked affective element. (Sphenoidal electroencephalography was not carried out).

CASE 3.—Mr. A.G.T.S. Aged 41 years. Sustained 2 severe head injuries, with a paranoid schizophrenic-like illness showing clinical and EEG evidence of temporal lobe epilepsy. The epilepsy commenced when patient was 11 years old, and the psychosis 27 years later. The head injuries post-dated the onset of epilepsy by 10 and 12 years.

CASE 4.—Miss E.T. Aged 21 years. Temporal lobe epilepsy as a result of a complication of whooping cough, probably vascular, aged 1½ years, with a markedly abnormal personality developing into a paranoid schizophrenic-like illness. The

dated from childhood while the psychosis lasted a little over one year's duration.

CASE 5.—Miss O.M. Aged 22 years. Epilepsy with EEG evidence suggesting the origin in the temporal lobe, developing a paranoid schizophrenic type of illness. The epilepsy may have been post-traumatic, or a doubtful head injury may have resulted from an epileptic attack. The epilepsy dated from childhood and the psychosis had a duration of 5 years.

CASE 6.—Miss F.M.S. Aged 24 years. A typically schizophrenic type of psychosis developing in a patient with long standing epilepsy clinically very suggestive of temporal lobe origin without definite EEG proof, but with EEG and AEG suggesting the left hemisphere as the source. The epilepsy commenced when the patient was 2 years old. The psychosis was of 3 years duration.

CASE 7.—Mrs. D.C. Aged 32 years. Clinically temporal lobe epilepsy with later EEG evidence of temporal lobe foci, developing a paranoid schizophrenic-like illness with depressive features, within a few years of the onset of the epilepsy.

CASE 8.—Mr. L.W.H. Aged 43 years. Long standing (at least 30 years duration at onset of psychosis) epilepsy, temporal lobe in origin on clinical and EEG evidence. He developed a paranoid schizophrenic-like illness. This case is the nearest to a pure paranoid state in the series as the delusions tended to be systematised around one idea, but he showed definite loss of conceptual thought and incongruity of affect, and therefore is legitimately classified with the paranoid schizophrenic group.

II. Paranoid Reactions—Nil

III. Affective Psychosis

CASE 9.—Miss F.K.T. Aged 47 years. A chronic depressive psychosis in a patient of low intelligence with long standing (10 years at the onset of psychosis) epilepsy of obscure origin—possibly idiopathic.

CASE 10.—Mr. J.M.C. Aged 45 years. Chronic hypomanic state with religious and messianic delusions commencing soon after the onset of epilepsy when he was 36 years old. EEG evidence points to the epilepsy originating in the temporal lobe.

CASE 11.—Miss B.L. Aged 36 years. Symptomatic epilepsy following an undiagnosed (? venous thrombosis) organic lesion of the right side of the brain, aged 18 months, developing an affective psychosis mainly hypomanic, the delusions and hallucinations being mainly concerned with a religious theme and including the idea that she had a divine message which it was her duty to impart to the world.

IV. Dementia

CASE 12.—Miss J.S.C. Aged 41 years. An acute dementing condition with delusions and hallucinations developing a few years after the onset of epilepsy, aged 17 years. In spite of a normal EEG and cerebral biopsy the picture remains doubtful.

BIBLIOGRAPHY

1. Kraepelin, E. *Dementia Praecox*. Trans. by Barclay, Edinburgh: Livingstone, 1919.
2. Varkentin, W. *New York Psychiat. Psychol. and Hygiene*, 4: 112, 1918.
3. Knapp, E. *Arch. f. Psychiat.*, 83: 547, 1928.
4. Glauz, A. *Zschr. f. d. Ges. Neurol. u. Psychiat.*, 135: 450, 1931.
5. Grubbe, H. W. *Z. ges. Neurol. Psychiat.*, 154: 391, 1936.
6. Alstrom, C. H. *Acta Psychiat. Kbh. Supplement*, 63, 1950.
7. Jones, H. G. *Revue de Psychologie Appliquée*, 3: No. 3, 1953.
8. Hoch, P. *Am. J. Psychiat.*, 99: 507, 1943.
9. Kahlbaum, K. *Die Katatonie oder das Spannungsirresein* in *Klinischen Abhandlungen*, Berlin: Hirschwald, 1874.
10. Kalinowsky, L. B., and Hoch, P. H. *Shock Treatments, Psychosurgery and other Somatic Treatments in Psychiatry* (2nd Ed.). New York: Grune and Stratton, 1952.
11. Gibbs, F. A. *J. Nerv. Ment. Dis.*, 113: 522, 1951.
12. Mulder, D. W., and Daly, D. *J.A.M.A.*, 150: 173, 1952.
13. Hill, D. *Proc. R.S.M.*, 46: 965, 1953.
14. Jasper, H., Pertuiset, B., and Flanigin, H. *Arch. Neurol. Psychiat.*, 65: 272, 1951.
15. Karagulla, S., and Robertson, E. E. *B.M.J.*, 1: 748, 1955.
16. Meduna, L. *von Z. Ges. Neurol. Psychiat.*, 152: 235, 1935.
17. Sargent, W., and Slater, E. *An Introduction to Physical Methods of Treatment in Psychiatry*. Edinburgh: Livingstone, 1948.
18. Hill, D. *Folia Psychiatrica, Neurologica et Neurochirurgica Neerlandica*, Jaargang 1948 Congresnummer.
19. Cobb, S. *Arch. Int. Med.*, 87: 889, 1951.
20. Bleuler, E. *Dementia Praecox or the Group of the Schizophrenias* trans. by J. Zinkin. New York: International University Press, 1950.
21. Goldstein, K. *J. Nerv. Ment. Dis.*, 97: 261, 1943.
22. Benjamin, J. D. *Language and Thought in Schizophrenia*. Ed. by J. S. Kasanin. Berkeley and Los Angeles: University of California Press, 1946.

A STUDY OF THE TRANSFER OF LONG-HOSPITALIZED PATIENTS TO A CONVALESCENT SERVICE

FREDERICK PHILLIPS, M. D., AND SOPHIA BELLE MAY, M. A.¹

Chronic patients in state mental hospitals (however "chronic" may be defined) are usually patients who live in wards less adequately staffed, and consequently less active therapeutically and socially, than other wards in the hospital. They are, therefore, a group about whom less is known during the course of hospitalization, than is known of other patients.

In order to learn more about this group, 72 male patients at Spring Grove State Hospital, almost three-quarters of whom had been in the hospital from 5 to 45 years and all of whom were considered to require prolonged hospitalization, were studied. In obtaining information about the patients, the staff also learned something about the functioning of the hospital. Out of this study was born a new conception of the role of the mental hospital.

ORIGIN OF PROJECT IDEA

Early in the winter of 1952, members of the professional staff expressed concern about the many inadequacies of the poorly defined and organized hospital work program and proposed a study of a small group of patients employed in the hospital to obtain factual information.

The area selected for study was a Convalescent Cottage, the first unit to be occupied of 4 newly erected modern cottages, each planned to house about 50 patients. They were intended to serve as a convalescent service, a new concept in the hospital's existing architectural and administrative scheme.

Cottage I was opened in November 1952 with the transfer of male patients from the Continued Care Service, where many had for years lived in one of two old and overcrowded buildings. They were chosen for their ability to live on an open ward with a minimum of supervision and personal care.

Those who first came to Cottage I then, while not truly convalescent, unless one might say "chronically convalescent," had been able to maintain at least a minimally independent existence within the hospital.

This cottage was chosen for 2 reasons: 1. more men than women might be expected to be engaged in hospital work assignments off the ward; and, 2, it was a group sufficiently small numerically and segregated geographically to separate for study.

CHANGE IN FOCUS

Before the study actually began the original idea was expanded to include ways of stimulating these patients to become more socially active and if possible as a result of this experience, to leave the hospital.

At the end of 2 years, by July 1, 1955, 26 of the 55 patients considered eligible to leave the hospital (as described later in this report) had done so: 18 in foster care, 9 by parole to their families or outright discharge, and one by elopement. Of the 26, only 3 were again in the hospital July 1, 1955. Not only had 52% of those considered able to leave actually moved into the community but 25 of the 26 were economically self-sufficient during their convalescent leave. Only one patient required tax-supported assistance, obtaining an old age assistance grant.

The immediate, practicable results, encouraging though they were, turned out to be less important than the long range effect of the ideas precipitated by the project—ideas that touched off basic changes in hospital thinking. The final report, therefore, is written to highlight the impact on the project group of this intimate, concentrated experience with chronic patients. Analysis of factors influencing patients' ability to leave and to remain out are left to a subsequent report.

STRUCTURE OF THE PROJECT

Spring Grove State Hospital is the third oldest state mental hospital in the United

¹ From the Spring Grove State Hospital, Baltimore 28, Md.

States, with an average in-patient population of 2800, distributed at the time the project was undertaken in an Admission Building, a small proportion in the infirmary and other services, but the majority housed in 2 continued care services. The new, modern convalescent cottages and a treatment building for women patients had just been completed.

Staff was inadequate but no more so than usual in state hospitals. Because Spring Grove is close to psychiatric centers in Baltimore and Washington and because its superintendent and clinical director provided progressive, patient-oriented leadership, the hospital had become a training center for all related professions: nursing, psychology, social work and psychiatry. The staff consequently was more than usually treatment conscious. A foster care program, therapeutic rather than custodial, had been in operation since 1941. The social service department had already considerable experience with long hospitalized patients, but largely those who had some motivation to leave and had been individually referred.

STAFF

The staff engaged in the study consisted of a psychiatrist, chief of the men's continued care service, who initially administered the convalescent cottages, the nursing supervisor of the convalescent service, a vocational counsellor from the division of vocational rehabilitation, and a case work supervisor. The latter devoted half time to this project and served as co-ordinator and recorder of its activities. The project began February 1, 1953 and continued to July 1, 1953, where all the staff participants, except the nurse, assumed responsibilities elsewhere; no service was, therefore, available to the patients after July 1 which was not already provided for in the convalescent service.

Cottage I designed for 50 patients, is a modern, spacious brick building with some double rooms and some small dormitories, with its own dining area, seating 4 at a table, and several rooms for recreational purposes. In size and comfort, it is in dramatic contrast to the buildings from which the patients came. Before the project officially began, the

psychiatrist transferred to other buildings those patients who were too deteriorated to participate actively in cottage activities. In their place came 4 patients from the admission building, 2 long hospitalized patients who were transferred as reward for faithful service, and 2 who had been admitted 7 and 11 months respectively before this transfer.

The project involved 72 patients, 49 of whom were continuously resident in Cottage I from February 1 to July 1, 1953. Thirteen were transferred to Cottage I between February and July, 6 from the continued care service and 7 from the admission service. Five of these 7 were admitted after January 1, 1953 and had, therefore, a different relation to hospital residence than the rest of the group. They were, however, expected to require prolonged hospitalization. Eleven left the Cottage during these 5 months, 7 to live in the community and 4 transferred to other buildings.

METHOD

The methods developed from actual experience and not without fumbling. To provide for interchange of ideas and a truly collaborative effort, the staff members met weekly during the first month, and thereafter irregularly. However, there were frequent conferences between the social worker and other members of the team.

Weekly group meetings were held with the patients to give them an opportunity to discuss their own ideas about living in the new building and to raise whatever problems they wished. The meetings, held from February 3 through May 26, were voluntary with an average attendance of 20 to 25. They were conducted by the psychiatrist, with the social worker serving as participant observer.

Beginning in March, weekly staff meetings were held to interview individual patients, usually 3 at each meeting. All members of the team participated in these conferences at which time the history was reviewed, the patient interviewed and the thinking of the various disciplines pooled to plan for further diagnostic or treatment measures. In addition, patients had planned individual contacts with the staff: 6 with the vocational counsellor, 5 with the doctor, 23 with social

workers and 8 with psychologists for testing.

The social worker recorded the staff planning meetings, the patient group meetings and, from all sources, filled out a card on each patient containing face sheet data, activities in the hospital, staff recommendations, etc. to be used for statistical reference. The psychiatrist dictated a summary of the staff conference for the patient's chart.

FACE SHEET INFORMATION

Ages ranged from 18 to 81 but this was predominantly an older group (47% over 50); hospital residence ranged from a few months to 45 years (71% more than 5 years, 53% more than 10 years and 20% more than 20 years.)

DIAGNOSIS

Fifty-eight per cent (42 patients) were schizophrenic, 17% (12) mentally defective (not psychotic), 15% (11) chronic brain syndromes (lues, Parkinsonism, arteriosclerosis, etc.) and about 10% (7) manic-depressive, involutional and reactive depressions.

PATIENTS' EXPERIENCE AND ADJUSTMENT IN THE HOSPITAL

When the staff inquired about the patients' experience in the hospital, little reliable or consistently recorded information was available. Nursing notes were meager; and the charts often contained only fragmentary data. Certain facts like hospital employment, other information, and paroles rarely appeared. From a cursory check, so few charts had recent progress notes that a survey was made of all the charts to note the date of the last progress note prior to February 1, 1953 (see Table 2).

The interval between progress notes, prior to the last, was also likely to have been long (5 to 11 years). The material recorded in one chart states in full: 1/15/35—"Works as one of the night men in the boiler house. Takes little interest in surroundings. Patient does not disturb his environment." 2/14/42 "Hands well." In another chart appeared: 3/12/42—"Foot better." 1/23/48 "Blood Wassermann positive." In still an-

TABLE 1

AGE AND LENGTH OF HOSPITALIZATION AS OF 7/1/53

Age	Total	Length of hospitalization			
		Less than 2 yrs.	2-5 yrs.	5-10 yrs.	10 yrs. and over
18-29 yrs. ...	5	4	1	0	0
30-39 yrs. ...	10	3	1	2	4
40-49 yrs. ...	23	3	3	5	12
50-59 yrs. ...	10	0	2	3	5
60-79 yrs. ...	7	1	1	0	5
79+	17	1	1	3	12
Total	72	12	9	13	38

other: 3/2/49 "Infection around nail." 1/12/53 "Abscess of molar with general anesthetic."

As an additional check on the use of the patient's chart, a survey was made of the last occasion prior to February 1, 1953 that the chart had been signed out of the record room. (Records are filed centrally. Three years previous to the project a system of signing them out had been initiated).

The charts of 26 patients (36%) had not been taken out of the record room in 3 years.

TREATMENT

Treatment was defined as specific "psychiatric" therapy: shock treatment of various kinds, anti-luetic therapy, occupational therapy, and individual or group psychotherapy. Medical and surgical treatment for physical ailments not directly related to the psychiatric condition was not included. The data were secured from the charts. Hopefully, other treatment was given but not recorded.

From the time of their admission to February 1, 1953, 23 patients had had one or more of the specific psychiatric therapies, as defined above. Fourteen had had a course of electroshock therapy, 4 anti-luetic, 13 indi-

TABLE 2

Length of hospitalization	Total	Last progress note made within			
		1 yr.	1-2 yrs.	2-5 yrs.	Over 5 yrs.
	68*	16	15	27	10
Less than 1 yr.	2	2	0	0	0
1-2 yrs.	6	4	2	0	0
2-5 yrs.	9	4	3	2	0
5-10 yrs.	13	3	2	8	0
10+	38	3	8	17	10

* 4 patients admitted after February 1953.

TABLE 3

Length of residence	Total	No. of patients treated within 5 yrs.	Per cent treated
	72	15	66
Less than 2 yrs....	12	10	83
2-5 yrs.	9	4	44
5 yrs. or more	51	1	2

individual or group psychotherapy and 10 occupational therapy. Only 2 patients hospitalized over 5 years had received either occupational or group psychotherapy.

If the time during which treatment was given is limited to the 5 years immediately preceding February 1, 1953, only 15 patients (21%) had had psychiatric treatment. The length of residence in the hospital of these patients is interesting: (See Table 3).

Contact with Families.—Patients hospitalized longer than the staff expected had retained contact with their families. Regular contact with some family member, even if infrequent, was considered as retaining contact. Eight patients had no known relatives. Of the remaining 64, 22 no longer had contact (see Table 4).

However, the quality of that contact—retention of the family as a resource when hospitalization ends—seemed to undergo a change with the passage of time, the family gradually excluding the patient as a family member even while continuing interest in him. (This is expressed in the way the patients did leave. Of the 19 patients retaining contact with their families who left by July 1955, 6 of 7 hospitalized less than 5 years returned to their families while only 3 of 12 hospitalized more than 5 years did so.)

Hospital Employment and Privileges.—Only little more than one-half of these "open ward" patients prior to February 1953 worked off the ward. (Eleven of these 37 received pay from the hospital ranging from \$2 to \$25 a month.) Twenty patients worked exclusively on the ward. Fifteen did no work.

TABLE 4

Length of residence	Total	Retaining contact	Percentage
	64	42	63
Less than 5 yrs. ..	19	17	89
More than 5 yrs. ..	45	25	56

Some of the patients on the hospital payroll had responsible jobs: one as supervisor of the hospital print shop, another as relief switchboard operator, etc. Three patients were working 12 hours, 7 nights a week at the power house. Others had been operating for years in jobs well below their present potential.

All 72 patients transferred to Cottage I were presumed well enough to handle ground privileges and the doors were left unlocked. However, 8 never left the ward, 27 remained on the hospital grounds (24 of these had never asked for greater freedom) and 37 occasionally or frequently made trips into nearby towns.

Previous Residence in the Community.—Five patients had been placed in foster care and 4 paroled to their families at some time prior to 1953. They had remained out from 10 to 228 days. Nine others had previously been referred to social service for help in making plans to leave but all declined the opportunity to return to the community.

Ward Adjustment.—The patients had been selected for the cottage because they were considered able to live with others with only minimal supervision. Although their behavior varied from seclusiveness, with considerable psychotic preoccupation, to a fair degree of social integration, the general attitude was of human beings living quite separately from one another. Watching TV was the major leisure-time activity. About 12 went to the hospital movies and dances. About the same number regularly read newspapers and magazines but few books. Gardening occupied 4 and a few played ping-pong or worked on jig-saw puzzles.

Ability to Live Outside the Hospital.—Although many patients functioned in routine fashion, often below their actual capacity and with little stimulus for change provided, many were making a marginal or better adjustment to the social demands within the hospital, social demands at least resembling the expectation of the outside world. But for few did this ability seem to create any wish to leave. Up to this point, the staff had used the usual criteria for parole planning: the patient's capacity to function adequately within the hospital in terms of the

resources outside in family or community for his care, and the degree of the patient's motivation to leave.

These criteria resulted in all too familiar half-answers as reasons against parole for many of the 72 patients. For instance, the staff found themselves saying, "These men are too afraid to leave," or "No one would give him a job," or "That patient's sister does not want him to leave." The "essential" seemed to the group to lie in the "definition" of the hospital itself as a treatment and/or protective service for the mentally ill.

The facts so far indicated that treatment, in any active sense at least, had seemed to diminish drastically with the years in the hospital. As a matter of fact, the longer the patient was in the hospital, the less likely was the staff to know much about him. The pattern bears a suggestive correlation to the parole probability figures of the National Institute of Mental Health.²

The staff, then, shifted the criteria of parole readiness from the *patient's* resources to the *appropriateness* of hospitalization as a service and reformulated the questions. Is the patient dangerous to himself or others? Is he likely to benefit either from the treatment available in the hospital or from the protection it affords? If not, then he should not be in the hospital.

With these new criteria, the psychiatrist, nurse and social worker without consultation with each other each compiled a list of patients able to live outside. The social worker listed 50 patients who could leave, the doctor 55 and the nurse 60. When the lists were compared, there was agreement regarding about 47 patients. Each had a few patients also on another's list; each had a few on no other list. (Interestingly, no patient had left the hospital 2 years later who was not originally on all 3 lists.)

The staff group agreed, after discussion, on 55 patients able, on the basis of this new formula, to leave the hospital. It was not assumed, of course, that these patients could return to the community without consider-

able help from their families or through foster care program. Nor was it assumed that any appreciable number, at this late date in their lives, would choose to make the attempt, even with help. The implications of this review were, however, startling. Fifty-five of 72 patients, or 76%, no longer required hospitalization. How much more could existing hospital facilities achieve for the 24% still requiring hospitalization if time and energy were not expended on the other 76%.

OUTCOME OF PROJECT

Of the 55 patients considered able to leave, only 7 were immediately interested and left the hospital by July 1, 1953. Eleven demurred but thought they might be willing to leave later. (By July 1955, 10 had left and the last was well on the way.) But 37 out of 55 (66%) rejected the idea. They were too frightened to talk about it or they said, "I have too much to lose. I can't expect to have it so good outside." Or "Why didn't you ask me 10 years ago?" (By July 1955, 9 did, after all, leave—5 died. None of the 5 admitted after 1/1/53 left.)

As the project progressed there was noticeable improvement in about 70% of the patients with greater sociability and more relaxed and pleasant contacts with personnel. Those patients working 7 nights weekly were given 2 days off each week and improvement in their ward adjustment was noted.

Much was left undone. The fact that the project was time-limited rather than a continuing service has itself certain serious implications. If, as it seemed to the staff, the major gain was the fact that 72 patients became individualized, many for the first time in years (with the possibilities this created for thoughtful planning, stimulation—and hope—for patients and staff), the gain itself is a sad commentary on how much is lost on countless chronic wards where such attention is not available.

Within the limitations imposed on the majority of state hospitals, what might be done to prevent this waste in human life and productivity?

² Facts and figures about mental illness and other personality disturbances. Bethesda, Md.: Natl. Inst. of Mental Health, April 1952.

WHAT MAKES PATIENTS "CHRONIC?"

In spite of the fact that the number of patients in this study is small, the information obtained cursory and the methods of intervention used pathetically meager, nevertheless, the thoughts provoked by the experience may have some validity for others concerned with long hospitalized patients and may at least been suggestive to the hospital in which the study occurred.

Tentatively, chronicity might be described as an impaired but relatively stable level of adjustment existing over an extended period and involving, finally, an unwillingness or inertia about effecting any change. Mental illness may be chronic without necessitating hospitalization at all or remain chronic following hospitalization, impairing as it so often does the individual's ability to get along with others.

Mental illness may be chronic at a much lower level of adjustment than was true of the patients in Cottage I. But even with residual symptoms, prior experience in the foster care program at Spring Grove indicates many such patients can maintain a satisfying life outside the hospital walls.

Precisely because many of the patients in Cottage I were able to function in relation to job, social activity and living with others, although sometimes in a minimal fashion, the question arises as to whether this is chronicity in a medical or, primarily, in a social sense, having less to do with the course of the illness and more to do with the way these men lived together, for a considerable time, in a particular kind of community—the mental hospital.

Facts about progress notes, psychiatric treatment and contact with family for these 72 patients do suggest that after 2 years, hospital activity in connection with the patient's recovery begins to ebb and a substantial difference is apparent after 5 years.

Timing is undoubtedly an important factor in the delicate balance between the patient's and family's satisfaction and dissatisfaction with living in Spring Grove as an accepted and, finally, an essential way of life.

Satisfaction with life in the hospital, especially when it compares favorably to what

may be available outside, is a necessary ingredient. New buildings, active recreation programs, etc., may even deepen this pattern for many without sufficient staff or a community-pointed convalescent program.

The loss of identity as an individual plays a large part in furthering chronicity. Limited staff, over-crowded buildings, the inaccessibility of records, as well as the patients' own desire to remain unnoticed promote a protective kind of anonymity. Even for those patients who call themselves to the staff's attention as "nuisances," "amusing characters" or "helpful souls," personal identity is lost in the stock roles they play.

The staff's own expectation is probably one of the most telling factors in this whole problem, an expectation absorbed into patient mores and circulated back to the staff. Spring Grove, as well as other state hospitals, seems to be in a transition between 2 hospital "cultures:" the old concept of asylum with its function of protective custody, and the new concept of temporary care during a specific treatment program. One culture is emerging from but has not yet displaced the other.

The patients described in this project span these 2 philosophies. Many began their hospitalization during the "asylum" period. They were cared for, even if the quality of care was sometimes deplorable. Conformity to hospital mores resulted, after a period of years, in stagnation—witness the progress note, "Patient does not disturb his environment," which was not followed by a referral to social service for help in leaving. Today, more than likely, such referral would result. Patients, faced by this inexplicable change in hospital attitude, express themselves resentfully, "I've worked for the hospital for 20 years; now they want to get rid of me." Or, as one patient, disturbed by the suggestion he leave, rushed to the superintendent to complain, "I was born and raised in Main Building [an old chronic service] don't let them take me away!"

For many years the hospital will have residents from this generation of "chronics." Slowly, ways may be found to help some of these "frozen" ones to leave but, more im-

portant, ways may be found, need to be found, to avoid creating future generations of such patients.

SUMMARY

For five months a staff group of psychiatrist, social worker, nurse and vocational counsellor worked closely with a group of 72 male patients, about 75% of whom had been hospitalized more than 5 years but who were currently able to maintain, with little supervision, a minimal social level of adjustment at least. The patients had recently been transferred from old buildings to a modern convalescent cottage. Twenty-six patients, who might otherwise have stayed indefinitely, did leave but 29 others—or a total of 55 patients of the 72—actually were no longer receiving any active benefit from hospitalization. A differentiation seemed pertinent

between chronicity of the illness itself and social chronicity in which the individual becomes adapted to a routine level of social functioning below his actual capacity. The culture of the state hospital seems to invite chronicity in the latter sense.

The study indicates some of the threads in this pattern—often implicit rather than explicit. Chief among them is perhaps the old conception of the state hospital's function to give shelter indefinitely to those for whom no obviously better plan is available in the community and who are not motivated to try.

The study suggests a concept of hospitalization limited to the continuing appropriateness of that service in terms of treatment and/or protection and some of the administrative means by which the social adjustment of the patient might then be stimulated to keep pace with the expectation of future plans to live outside.

EFFECTIVE UTILIZATION OF ELECTRIC CONVULSIVE TREATMENT

PETER F. REGAN, M.D.¹

Some of the problems involved in the correct timing of the use of insulin and electric convulsive treatments have recently been clarified by Hill(3). Greaves, *et al*(2) have demonstrated the specific psychopathologic situations in schizophrenic reactions in which insulin treatment works most effectively. It is the purpose of this report to delimit the psychopathologic situations in which electrically induced convulsions may be expected to produce satisfactory or unsatisfactory results. When these results are joined with those of current investigations of the effectiveness of chlorpromazine and other pharmacologic treatments, it is hoped that the varied physical treatment tools available to the psychiatrist may be used in efficient, complementary fashion.

CASE MATERIAL AND METHODS

This report is an analysis of 200 unselected cases that received electric convulsive treatment (ECT) at the Payne Whitney Psychiatric Clinic. For the past 10 years, ECT has been used as a symptomatic adjunct to psychotherapeutic treatment. For the most part, it has been administered to relieve depressions or to control excitements. In such instances, ECT was introduced after a psychotherapeutic relationship had been established, when the symptoms interfered with further psychotherapeutic progress; the timing of ECT administration was, therefore, usually similar to that described by Hill(3). In some instances, severe excitements forced the use of ECT at an early stage in treatment, or ECT was used as a last resort in chronic illnesses.

When used in depressions, ECT was administered twice a week, and when used in excitements, it was administered daily for a series of 2 to 5 treatments. Atropine sul-

phate 0.6 milligrams was administered one hour before treatment. On a few occasions, curare or tubocurarine was used with ECT; this study does not include patients treated with succinylcholine. The convulsion was produced with the use of 60-cycle alternating current delivered through bitemporal electrodes by standard Medcraft ECT machines (Models B2 and B24). The voltage ranged from 100 to 160 volts, and the current was applied for 0.1 second to 0.6 second. The figures in this report refer to treatments administered; occasional missed convulsions are counted as treatments.

In the analysis of case material which follows, most terms are self-explanatory. The term "psychopathologic condition" refers to the characteristics of the patient's emotional, intellectual, and behavioral state at the time ECT was administered. The psychopathologic condition is determined in accordance with the principles outlined by Diethelm(1) which involve a synthesis of the observable personal and social functioning with a thorough knowledge of the conscious and unconscious dynamic significance of the functioning for the individual.

Degree of improvement has been determined by the application of the following criteria: a patient was considered unchanged if illness was not improved in any observable fashion; mild improvement indicates that symptoms decreased to the extent that he could live with slightly increased comfort in a hospital setting; moderate improvement indicates that a patient was still partially incapacitated by symptoms; marked improvement indicates that the patient achieved freedom from symptoms. Improvement rates have been determined for the patient's condition at termination of the first or the only course of ECT, and at discharge. For all determinations, the author has relied on personal contact, examination of clinical records, and the personal evaluation of the clinic's psychiatrist-in-chief.

¹From the Department of Psychiatry, Cornell University Medical College and the New York Hospital (Payne Whitney Psychiatric Clinic), New York City

RESULTS

Identifying Characteristics.—The sex distribution of the 200 patients (131 female, 69 male) was in accordance with over-all hospital distribution. As is commonly the case in voluntary hospitals, protective environments had delayed hospitalization of many women, and more of them had chronic illnesses; this factor must be considered in evaluating the finding that the men had a better improvement rate than the women (Table 1) at the time of termination of ECT (92.8% vs. 82.5%) and at discharge (85.5% vs. 62.5%). An acute onset is associated with better outcome than is gradual onset at termination of ECT (94.8% vs. 80.7%) and at discharge (82.9% vs. 67.3%). Similarly, illnesses of less than one year's duration have a better improvement rate at termination of ECT (92.5% vs. 76.1%) and at discharge (79.5% vs. 61.1%).

With 100 patients under 40 and 100 patients between 41 and 79 years of age, it is clear that the older group improves more than the younger at termination of ECT (92% vs. 80%) and at discharge (82% vs. 65%). The great majority of the younger patients, however, were those with schizophrenic reactions, many gradual in onset and chronic in nature; it seems doubtful, there-

fore, that age in itself has such a significant effect.

Treatment Characteristics.—Most patients remained in treatment in the hospital from 3 to 9 months (Table 2). The duration of hospitalization was not reflected in the effectiveness of ECT, all lengths of stay being associated with similar improvement rates at the termination of ECT; those patients who needed to remain longer than 6 months, however, had a poorer outcome at time of discharge.

ECT^{*} was administered to 102 patients with 3 months, to 68 with 3 to 6 months, and to 30 with more than 6 months of hospitalization. One hundred sixty-eight patients received one course of ECT, 28 received 2 courses, 2 received 3 courses, and 2 received 4 courses. The total number of treatments administered to a single patient ranged from 1 to 37 (Table 2), most patients receiving 5 to 12 ECT. No significant differences may be observed in improvement at termination of ECT except for those patients who received less than 5 treatments. On the other hand, those who required only 5 to 8 ECT had a better improvement rate at discharge

TABLE 1

FACTORS IN IMPROVEMENT

1. Identifying characteristics

Character- istics	Number of patients	Patients improved at termination of ECT	Patients improved at discharge
Sex			
Female	131	108 (82.5%)	88 (62.5%)
Male	69	64 (92.8%)	59 (85.5%)
Age			
10-29 years	66	50 (75.7%)	43 (65.1%)
30-39 years	34	30 (88.2%)	22 (64.7%)
40-79 years	100	92 (92.0%)	82 (82.0%)
Onset			
Acute	76	72 (94.8%)	63 (82.9%)
Gradual	124	100 (80.7%)	84 (67.3%)
Duration of illness			
Less than 1 year. 133	133	121 (92.5%)	106 (79.5%)
More than 1 year. 67	67	51 (76.1%)	41 (61.1%)
Total	200	172 (86%)	147 (73.5%)

TABLE 2

FACTORS IN IMPROVEMENT

2. Treatment characteristics

Character- istics	Number of patients	Patients improved at termination of ECT	Patients improved at discharge
Duration of admis- sion (days)			
1-89	23	21 (91.3%)	20 (86.9%)
90-179	77	67 (87.0%)	60 (77.9%)
180-269	55	44 (80.0%)	38 (69.0%)
270-360	20	18 (90.0%)	14 (70.0%)
More than 360..	25	22 (88.0%)	15 (60.0%)
Number of ECT			
1-4	22	12 (54.5%)	13 (59.0%)
5-8	74	66 (89.0%)	62 (83.7%)
9-12	47	43 (91.4%)	35 (74.4%)
13-16	25	23 (92.0%)	18 (72.0%)
16-37	32	28 (82.5%)	19 (59.3%)
Weight change with ECT			
Weight gain ...	119	110 (92.4%)	97 (81.5%)
Weight loss ...	26	22 (84.6%)	19 (73.0%)
No change	9	5 (55.6%)	5 (55.6%)
Not known	46	—	—

83.7%) than did those who required more ECT; those who required more than 16 ECT had a lower improvement rate at discharge (50.3%) than any other group with more than 4 treatments.

Subcoma insulin treatment was given in conjunction with ECT in 25 instances, 17 in patients with paranoid schizophrenic reactions; the improvement rates are not significantly different when results are compared. Weight change was studied in 154 patients (Table 2); an increase in weight during treatment was associated with greatest rate of improvement (92.4% at termination of ECT and 81.5% at discharge); decrease in weight was associated with poorer results (84.6% at termination of ECT and 73.0% at discharge); no change of weight was associated with the poorest percentage of improvement (55.6% at termination of ECT and at discharge) in the 9 patients in whom it was observed.

Diagnostic Categories.—ECT was administered to 62 patients with depressive reactions (7 of these occurred below age 40, and 5 were part of a manic-depressive reaction), 7 patients with manic excitements, 85 with schizophrenic reactions, 17 with paranoid reactions, 20 with psychoneurotic reactions with depression, and 9 patients with other conditions (such as confusional state, and epilepsy).

Marked deviations from the over-all effectiveness of ECT become apparent when the effect of treatment in these diagnostic categories is considered (Table 3). The improvement rates for the entire group are 86% at termination of treatment and 73.5% at discharge. Patients with affective disorders, paranoid reactions, and psychoneurotic reactions with depression, however, have improvement rates of 95.1%, 94.1%, and 90%, respectively, at termination of treatment; similarly they have improvement rates of 86.9%, 76.4%, and 85%, at discharge. In contrast, the patients with schizophrenic reactions show improvement rates of 80% at termination of treatment and 61.1% at discharge. Even with the group of schizophrenic patients, there is wide variation in accordance with diagnostic sub-categories,

TABLE 3
FACTORS IN IMPROVEMENT
3. Diagnostic characteristics

Character- istics	Number of patients	Patients improved at termination of ECT	Patients improved at discharge
Affective disorders			
Depressive reac- tions	62	59 (95.1%)	54 (87.0%)
Manic excite- ments	7	7 (100%)	6 (85.7%)
Schizophrenic reac- tions			
Paranoid	41	34 (82.9%)	24 (58.4%)
Catatonic excite- ment	16	13 (81.2%)	11 (68.7%)
Catatonic stupor.	5	5 (100%)	4 (80.0%)
Simple and hebe- phrenic	23	16 (69.5%)	13 (56.5%)
Paranoid reactions.	17	16 (94.1%)	13 (76.4%)
Psychoneurotic re- actions with depression ..	20	18 (90.0%)	17 (85.0%)
Other	9	4 (44.4%)	5 (55.5%)
Total	200	172 (86%)	147 (73.5%)

and a lack of consistency between results at termination of treatment and at discharge.

Emotional Status.—When the emotional status of the patient is considered, a similar deviation from over-all improvement rates is apparent. A total of 111 patients in all diagnostic categories received ECT when the predominant emotional state was depression; these patients had improvement rates of 91.8% at termination of treatment, and 81.9% at discharge (Table 4). Further investigation revealed deviations from this pattern, depending on what other psychopathologic condition or emotion was most prominently associated with depression. For the 81 depressed patients whose most prominent secondary characteristic was paranoid features, anxiety, agitation, fear, or marked sexual disturbance, the improvement rates were 97.5% at termination of treatment and 91.3% at discharge. For the 30 patients whose most prominent secondary characteristic was hostility (including aversion and negativism), guilt, or body overconcern, the improvement rates were 76.6% at termination of treatment and 56.6% at discharge.

TABLE 4

FACTORS IN IMPROVEMENT

4. Psychopathological condition—depression

Condition Depression as- sociated with:	Number of patients	Patients improved at termination of ECT	Patients improved at discharge
Paranoid features . (A-21, PN-1, O-1)*	23	22 (95.6%)	22 (95.6%)
Anxiety or agita- tion (A-19, PS-2, NPS-4, PR-2, PN-4, O-1)	30	29 (96.6%)	28 (93.3%)
Fear (A-11, NPS-1, PR-2, PN-3)	17	17 (100%)	15 (88.2%)
Sexual content ... (A-2, PS-4, PR-3, PN-2)	11	11 (100%)	9 (81.8%)
Hostility (A-6, PS-3, NPS-1, PR-3, PN-5)	18	14 (77.7%)	10 (55.5%)
Guilt (A-3, PS-1, PN-4)	8	7 (87.5%)	5 (62.5%)
Body concern (A-2, PS-1, NPS-1)	4	2 (50%)	2 (50%)
Totals III		102 (91.8%)	91 (81.9%)

* A—Affective reactions; NPS—Non-Paranoid schizo-
phrenic; O—Other; PN—Psychoneurotic reaction; PR—
Paranoid reaction; PS—Paranoid schizophrenic reaction.

In the remaining 89 patients, whose pre-
dominant emotional state was not depression,
the improvement rates were 78.6% at termi-
nation of treatment, and 62.9% at discharge.
In 61 of these patients, certain psychopatho-
logic conditions were predominant (Table
5), of which, only fear and marked sexual
disturbance appear to afford better improve-
ment, with respective rates of 92.3% and
80% at termination of treatment, and 69.2%
and 73.3% at discharge. Hostility would
seem to indicate a good initial response to
ECT, with a rate of 84.6% at termination of
treatment, but a poor eventual result, with a
rate of 53.8% at discharge. With anxiety
and fixed conditions with little affect, results
seem poor.

*Interaction of Diagnostic Category and
Psychopathologic Condition.*—The signifi-

TABLE 5

FACTORS IN IMPROVEMENT

4. Psychopathologic condition other than depression

Condition	Number of patients	Patients improved at termination of ECT	Patients improved at discharge
Sexual content ... (PS-6, NPS-1, CE-8)*	15	12 (80%)	11 (73.3%)
Hostility (PS-10, NPS-2, CS-1)	13	11 (84.6%)	7 (53.8%)
Fear (PS-8, NPS-1, CE-1, CS-1, PR-1, O-1)	13	12 (92.3%)	9 (69.2%)
Anxiety (PS-1, NPS-6, CE-1, CS-2)	10	7 (70%)	4 (40%)
Fixed, with little affect (PS-3, NPS-4, PR-2, O-1)	10	4 (40%)	4 (40%)
Totals 61		46 (75.4%)	35 (57.3%)

* CE—Catatonic excitement; CS—Catatonic stupor; NPS
—Non-Paranoid schizophrenic; O—Other; PR—Paranoid
reaction; PS—Paranoid schizophrenic reaction.

cance of the psychopathologic condition on
the results within a diagnostic category may
be illustrated by the results with depressive
reactions (Table 6). For the 51 patients

TABLE 6

FACTORS IN IMPROVEMENT

5. Interaction of diagnostic category and psycho-
pathologic condition

Diagnosis and condition	Number of patients	Patients improved at termination of ECT	Patients improved at discharge
Affective reaction			
a. Depression with paranoid features, anx- iety, agitation, fear or sexual content 51	51	51 (100%)	48 (94.1%)
b. Depression with hostility, guilt, or body concern 11	11	8 (72.7%)	6 (54.5%)
Totals 62	62	59 (95.1%)	54 (87.0%)

whose depression was associated with paranoid features, anxiety, agitation, fear, or sexual content, the improvement rate at termination of ECT was 100%, and at discharge was 94.1%. In contrast, the 11 patients whose depression was associated with hostility, guilt, or body concern had improvement rates of only 72.7% at termination of treatment, and 54.5% at discharge. The latter 11 patients accounted for 5 and the former 51 patients accounted for 3, of the total of 8 patients who did not improve.

This significance may be further examined by studying the degree of improvement among the 51 patients whose depression was associated with paranoid features, anxiety, agitation, fear, or sexual content; 33 (64.7%) had achieved marked improvement at termination of treatment, and 35 (68.6%) at discharge. In contrast, among the 11 patients whose depression was associated with hostility, guilt, or body concerns, only 2 (18.1%) had achieved marked improvement at termination of treatment, and 3 (27.2%) had at discharge.

DISCUSSION

Increasing experience with the newer pharmacologic methods of treatment indicates that no one of these drugs is universally applicable. Like electric convulsive treatment and other physical methods, they operate most effectively within certain spheres of psychopathology. Moreover, they share with other physical treatments the quality of acting symptomatically. When they are viewed in the broad field of physical treatment in psychiatry, therefore, it would seem inadvisable to attempt to supplant one physical treatment with another, or to regard any treatment yet developed as being fundamentally curative. Instead, each physical method, old and new, should be studied most intensively, in order to determine the specific situations in which each will work most effectively, and the time at which it can most effectively be integrated into a psychotherapeutic regimen.

If specific situations in which the different physical treatments offer maximal help are to be delineated, it seems apparent that the use of diagnostic categories to describe illness is not enough; the fact is that all

schizophrenic reactions, or all depressions, are not identical. Instead, increasing attention must be paid to the dynamic psychopathologic state of the patient. It is well recognized that the same emotions, attitudes, and symptoms occur in different diagnostic categories. Thus, hysterical features may be found in psychoneuroses, schizophrenic, and affective reactions, as may anxiety, or depression. Extensive psychoanalytic investigations have revealed that such psychopathologic conditions have specific dynamic and therapeutic characteristics. Investigations have also revealed, however, that the major diagnoses have equally specific dynamic and therapeutic characteristics. The qualities of the psychopathologic condition, therefore, will be merged with those of the diagnostic category. The result of this mixture will determine the therapeutic availability, the prognosis, and the optimal treatment of the individual patient.

It was the purpose of this study to determine whether or not an investigation of this interaction would contribute to a more efficient utilization of ECT, and would indicate its place in the armamentarium of psychiatric treatment. The findings require substantiation and extension with larger groups of patients. At this point, they confirm the impression that ECT will be most effective in those illnesses whose predominant feature is depression, but indicate clearly that this effectiveness is modified by the diagnostic category and the associated psychopathologic findings. Thus, greater effectiveness is achieved in affective reactions, less in paranoid and psychoneurotic reactions, and least in schizophrenic reactions. A similar differential effectiveness obtains for psychopathologic conditions: depression associated with paranoid features, anxiety, fear, agitation, or sexual content will respond to ECT with far better results than will depression associated with hostility, guilt, or body concern. Maximal effectiveness is achieved when depression with the first group of associated conditions is found in a patient with an affective reaction.

If depression is not present, diagnostic category and psychopathologic condition still modify the results of ECT. Fear and sexual content augur good results, while anxiety or

fixed conditions make a poor result likely. Even within schizophrenic reactions, catatonic stupors and excitements associated with fear or sexual content will respond well. In each of these conditions, however, the difference between improvement rates at termination of ECT and at discharge is a striking indicator of the fact that ECT remains a symptomatic treatment, and that ultimate results depend on the total therapeutic situation.

When the differential effectiveness of ECT is compared with that of chlorpromazine, some therapeutic possibilities begin to appear. Chlorpromazine has proven most effective in relieving hostility, whether with or without depression; initial studies at this clinic indicate that it may be possible to use chlorpromazine to control hostility until psychotherapy has relieved its pressure, and that ECT may then be useful if indicated for treatment of depression. Similarly, the apparent effectiveness of meprobamate in relieving anxiety may prevent the need for using ECT in its presence. If we are to utilize some of these leads, however, it would seem imperative that there be further intensive studies of the differential effectiveness of each physical treatment.

SUMMARY

This study is concerned with the effectiveness of ECT as an adjunct to the psycho-

therapeutic treatment of 200 patients. It is found that effectiveness depends both on diagnostic entity and psychopathologic state. Thus, affective disorders responded best to ECT; paranoid reactions and psychoneurotic reactions with depression responded well; and schizophrenic reactions poorly. Influencing these results, however, was the fact that depression associated with agitation, anxiety, fear, or sexual content yielded better results, and depression associated with hostility, guilt, or body concern yielded poor results, in each diagnostic category. In the absence of depression, fear and sexual content yielded good results, and hostility, anxiety, and fixation yielded poor results. Optimal efficiency was obtained only when ECT was indicated by both diagnosis and psychopathologic state.

It seems essential that information about differential effectiveness be determined for each of the physical treatments available in psychiatry. Only thus will it be possible to achieve maximum effectiveness and complementary utilization of these treatments.

BIBLIOGRAPHY

1. Diethelm, O. The Psychopathologic Foundation of Psychiatry (To be published).
2. Greaves, D. C., Regan, P. F., and West, L. J. *Am. J. Psychiat.*, 112: 135, 1955.
3. Hill, L. B., and Patten, J. D. *Am. J. Psychiat.*, 113: 60, 1956.

SENSORY DEPRIVATION

A REVIEW

PHILIP SOLOMON, M. D.,¹ P. HERBERT LEIDERMAN, M. D.,² JACK MENDELSON, M. D.,³ AND DONALD WEXLER, M. D.⁴

It has long been known through autobiographical writings that explorers and shipwrecked individuals who undergo isolation for many days may suffer curious mental abnormalities. In recent years it has been found that prisoners-of-war exposed to "brainwashing" may experience similar fates. Since perceptual and sensory deprivation seem to be basically involved in each instance, a number of investigators have begun to approach the subject experimentally. This article is a critical review of some of the most pertinent autobiographical, "brainwashing," and experimental data.

AUTOBIOGRAPHICAL REPORTS OF ENVIRONMENTAL STRESS

Admiral Byrd(1) wanted "to taste peace . . . quiet and solitude long enough to find out how good they really are." He spent 6 months alone in the Antarctic. Dr. Alain Bombard(2), who wished to prove that shipwrecked people could survive at sea for an indefinite length of time, sailed alone across the Atlantic Ocean for 65 days on a life raft, subsisting solely on what food he could get from the sea. Both men, dedicated scientists, reacted to their isolation and loneliness in almost identical fashion. The lack of change in their environment caused a monotony which was oppressive, and they felt themselves drawing deeply into themselves for emotional sustenance.

Both explorers found that while their lives were threatened daily by the hazards of

their milieu, it was the constancy of their surroundings which seemed like a force which would destroy them. Both men felt that they could control themselves and their environment only by thoroughly organizing their days, assigning themselves to a strict routine of work, and spending no more than one hour at a time doing a task. In this way, each felt he proved to himself that he could control both himself and his environment.

After 3 months alone, Admiral Byrd found himself getting severely depressed. He felt a tremendous need for "stimuli from the outside world," and yearned for "sounds, smells, voices and touch." Bombard, too, "wanted terribly to have someone . . . who would confirm any impressions, or better still, argue about them . . . I began to feel that . . . I would be incapable of discerning between the false and the true." Both men used the same mechanisms to fight off depression: controlling their thoughts, dwelling only on pleasant past associations and experiences and refusing to allow themselves to think about the anxiety-producing aspects of their situations.

Hallucinations and delusions as well as depression and anxiety play a prominent part in the accounts of other individuals under severe stress and isolation. Christine Ritter in her very sensitive document, "A Woman in the Polar Night,"(3) reported that at various times she saw a monster, and heard ski strokes on the snow where no one was evident. Pseudo-hallucinatory experiences occurred in which the "imprisoned senses circled in the past, in scenes without spatial dimensions," and at one point during the long arctic night she experienced depersonalization to the extent that she thought she and her companions were "dissolving in moonlight as though it were eating us up. The light seemed to follow us everywhere," and "neither the walls of the hut nor the roof of snow can dispel my fancy that I am moonlight myself." The Spitzbergen hunters

¹ Asst. clin. professor of psychiatry, Harvard Medical School, physician-in-chief for psychiatry, Boston City Hospital.

² Teaching fellow in psychiatry, Harvard Medical School, resident psychiatrist, Mass. General Hospital.

³ Teaching fellow in psychiatry, Harvard Medical School, clinical and research fellow in psychiatry, Mass. General Hospital.

⁴ Assistant in psychiatry, Harvard Medical School, assisting physician in psychiatry, Boston City Hospital.

used the terms *rar* (strangeness) to describe these experiences. They are reported by many who spent the winter in polar regions.

In discussing the effects of being alone in the Arctic (she would be alone for periods up to 16 days) Mrs. Ritter makes the interesting observation that

the extraverts among those who spend the winter here will always intrinsically create for themselves a sphere of activity and hence a sphere of reality, which will save them when no impulse comes from without. Those who find their pleasures in meditation, will withdraw into themselves, into regions of astonishing brightness; but those who are accustomed to yield to their inclination to idleness run the great danger of losing themselves in nothingness, of surrendering their senses to all the insane fantasies of overstretched nerves.

In 1943 Jan Baalsrud(4), a Norwegian soldier saboteur, while fleeing from the Nazis, spent 27 days alone on a mountainous plateau where he had to be left by friends who had rescued him. Because of frostbitten feet, he was unable to move from his sleeping bag. For at least 20 of these days, he was buried by a blizzard, his only sustenance for most of the time being a teaspoonful of brandy daily. He saved the last spoonful as a symbol of his continuing hope for survival. Within the first 36 hours he thought he heard the sound of skis and he shouted to people he thought were present. He felt that his brain was clear. . . .

his mind was occupied with the minute details of physical existence; to keep moving, to be on the watch for frostbite, to stop the snowroof from falling down. . . . Each of these tasks became an absorbing activity . . . and each an important part of his conscious effort not to die. When any of the tasks were accomplished, he felt he had warded off death for a few minutes. He sometimes visualized death as a physical being who prowled about him. He parried the lunges (of) this creature . . . and he was proud . . . when he thrust off . . . its attacks.

Tales of the sea have provided many accounts of hallucinatory phenomena. Capt. John Slocum(5) sailed alone around the world. During a gale in the South Atlantic he reefed his sails rather than take them down. Restricted to his cabin because of sickness he suddenly saw a man, who at first he thought to be a pirate, take over the tiller. This man refused to take down the sails on request from Slocum, but instead reassured

him that he was a pilot and would safely take his boat through the storm. The next day Slocum found his boat on true course 93 miles along. Later that night the pilot returned in a dream and reassured him that he would come whenever needed. For the remainder of the voyage during gales this apparition appeared to him several times.

Walter Gibson(6), a soldier in the British Indian Army, was on a ship torpedoed in the Indian Ocean by the Japanese in World War II. Of 135 survivors, there were only 4 alive one month later and he was the only Caucasian among them. Under the most extreme conditions of physical deprivation and partial social isolation Gibson reported that "all of us at various stages in that first week became a prey to hallucinations." Dreams which became prevalent at about the same time were "fierce and vivid dreams of food and drink and family gatherings." As the conditions became more extreme the feeling of comradeship disappeared and the men began to find themselves "watching our fellows covertly and suspiciously." Murder, suicide and cannibalism followed as social controls dissolved. Finally, some 4 weeks later after landing on an island, "the faces of person after person who had been on the boat appeared around me on the rocks and stones on the beach."

Gibson makes the important point that survival experiments on rafts and lifeboats, when the men know that they are never in real danger, are not comparable to the situation when men are facing the unknown alone and without knowledge of the end. He thus emphasizes the inherent difficulties in comparing natural situations with experimental studies.

BRAINWASHING

Major-General William Dean(7) was as unwilling a subject for perceptual isolation as Byrd and Bombard and Ritter were enthusiastic volunteers; yet his experiences were in many ways similar to theirs. He was kept apart from all other United Nations' prisoners and although he was under constant observation by North Korean guards he felt completely alone. He had great difficulty in preserving his judgement. "You have no

one on whom to test your ideas . . . a thought which you would normally discard . . . balloons in your mind until you are sure it must be exceptionally clever."

A physical fitness enthusiast, General Dean did calisthenics—even when reduced to crossing and uncrossing his fingers because of orders forbidding him to exercise, and he did algebraic problems in his head (as did Bombard). These activities made the General feel that he was maintaining his intellectual and physical integrity. Nonetheless, at one point during his imprisonment, he became so depressed that he attempted suicide.

Thought control, or "brainwashing"(8), a phenomenon which has existed in civilization for centuries, has taken on a new and sinister meaning, as seen from the experiences of both political prisoners and prisoners of war who have been held in prisons operated by the Russian and Chinese Communist governments. Lifton(9), describing the Chinese method, believes that "milieu control" is the element added to thought reform techniques which makes the latter so effective. He says "The Chinese Communist prison is probably the most thoroughly controlled and manipulated group environment that has ever existed . . . milieu control eliminates any possibility of reality testing or consensual validation."

Schein(10) and Lifton(11) describe how environmental manipulation was begun as the POWs were transferred to camps run by the Chinese Communists. Officers and non-commissioned officers were sent to separate camps, depriving the enlisted men of leadership and discipline. The enlisted men were further segregated according to race and nationality. They were told that they were war criminals and that therefore their rank and the unit to which they belonged no longer had meaning. Any organizations established by the POWs to maintain discipline and to ferret out intelligence were broken up by informers. The men who showed qualities of leadership were sent to separate camps.

The receipt of mail from home was regulated so that the POW was allowed to receive only those letters which were pessimistic about the outcome of the Korean Conflict

or indicated a lack of interest in the POW or the conflict. Such letters depressed the men. They lost interest in mail from home and tended to lose identification with their families. The men were made so suspicious of one another that the buddy system which had enabled soldiers in Japanese and German POW camps in World War II to maintain morale, became ineffectual. Informers and Chinese spies were so numerous the men felt that the only way to protect themselves was to withdraw from all intimacy with other prisoners.

As a result of such efforts, the goal of the Chinese Communist indoctrination, to make the men into a "group of isolates," was partially achieved. "The most important effect of the social isolation . . . was the consequent emotional isolation which prevented a man from validating any of his beliefs, attitudes and values through meaningful interaction with other men." Each man was on his own life-raft.

Once social and emotional isolation was achieved, indoctrination was begun. The only sources of information available to the POWs in Korea and to civilian prisoners in Red China, were Communist publications, motion pictures and radio broadcasts. These had to be discussed and studied until the prisoner could prove that he understood and accepted them. Communist ideas were repeated again and again until the prisoner, fatigued and half-hypnotized, accepted them as the truth.

Even after being returned to the United States, civilians who had been prisoners in Chinese Communist prisons for 2 to 4 years sometimes repeated their false confessions. They insisted that they were guilty of "crimes against the people" and praised the "truth and righteousness" of Communist doctrine.

According to Lifton, the basic tenet of thought reform was that each prisoner was a "reactionary spy" who must die and be reborn "in the Communist image." For the first 1 to 3 months the prisoner was interrogated almost constantly, either by "judges" or by his 7 or 8 Chinese cell mates organized into a team of inquisitors, whose purpose was to "help" the prisoner make his confession. The environment was completely or-

ganized so that every act of the prisoner was made known to the authorities. Routine was so thoroughly prescribed that even the time for toilet needs was set.

After 2 or 3 months of such treatment, in addition to suffering from physical fatigue and illness, the prisoner was usually very confused, "unable to clearly demarcate the boundaries of truth and fiction." He was depressed "frequently to the point of being suicidal," and sometimes experienced psychotic symptoms, "such as auditory hallucinations."

Once the prisoner had "confessed," to being an enemy of the people, his reeducation began. He was forced to participate in study groups which lasted 10 to 16 hours a day, taking up almost all of his waking hours. Every question or problem "must be solved by the group by means of discussion," in which the prisoner must examine his shortcomings or errors in belief and judgement. For years, until his education had progressed to the desired point, the prisoner spent his life in a cell so small that when the inmates (the prisoner and the 7 or 8 Chinese who formed the confession team) wished to turn over while sleeping at night, they could do so only together at a given signal from the team leader. Little wonder that gradually the "external milieu replaced the internal milieu." The prisoner under such a system is in a situation very similar to that described by George Orwell in "Nineteen Eighty-Four(12)."

Somewhat in contrast to Lifton and Schein, Hinkle and Wolff(13), in their survey of Communist interrogation and indoctrination methods, emphasize the importance of isolation as the major technique. They point out that

when the initial period of imprisonment is one of total isolation . . . the complete separation of the prisoner from the companionship and support of others, his utter loneliness, and his prolonged uncertainty have a further disorganizing effect upon him. Fatigue, sleep loss, pain, cold, hunger, and the like, augment the injury induced by isolation. . . . With the passage of time, the prisoner usually develops the intense need to be relieved of the pressures put upon him and to have some human companionship. He may have a very strong urge to talk to any human and be utterly dependent on anyone who will help him or befriend him. At about this time he also becomes mentally dull and loses his

capacity for discrimination. He becomes malleable and suggestible and in some instances he may confabulate.

Stypulkowski(14), in his autobiographical account of interrogation for several months by the Russians in Lubianka Prison, Moscow, graphically reiterates Hinkle and Wolff's findings.

In addition to milieu control in "brainwashing," the role of Pavlovian reflex psychology has been discussed by Meerloo(15) and the relationship to drive reduction mechanisms has been emphasized by Winokur(16) and by Santucci and Winokur(17).

The presence of a common denominator of *imposed control of external stimuli*, whether it be the reduction of news from the outside world or enforced solitary confinement, appears to be a factor of primary significance. Christopher Burney(18) expressed succinctly the effects of such control. He was an English army officer engaged in espionage in Occupied France during World War II and he was kept in solitary confinement by his German captors for 18 months. He said, "I feel a sense of impotence, an inexorable subjection to a machine of nameless horror." He added "Variety—is the very stuff of life. We need the constant ebb and flow of wavelets of sensations, thought, perception, action and emotion—keeping even our isolation in the ocean of reality, so that we neither encroach nor are encroached upon."

EXPERIMENTAL STUDIES

Walter(19) feels that the nervous system requires constant extrinsic sensory input to function normally and efficiently. While studying neural mechanisms and behavior in situations involving alterations of perceptual stimuli, Lilly(20) proposed the question: "Freed of normal efferent and afferent activities, does the brain soon become that of coma or sleep, or is there some inherent mechanism which keeps it going, a pacer-maker of the awake type of activity?" Lilly approached the problem by experimentally reducing the *absolute intensity* of physical stimuli received by a human subject. This was accomplished by suspending a subject, wearing only a blacked-out head mask for

breathing, in a tank of water maintained at 34.5 degrees centigrade. With this technique, visual, auditory and tactile stimuli were reduced to a minimum. A variety of results occurred, some involving highly personalized fantasy material and projection of visual imagery.

Experiments carried out in Hebb's laboratory by Bexton, Heron and Scott(21) attempted the *reduction of patterning* of stimuli to low absolute levels. Healthy college students were placed on a comfortable bed in an airconditioned soundproof cubicle. The subjects' arms and hands were enclosed in cardboard cuffs to minimize tactile stimuli and their eyes were covered with translucent glasses which permitted entry of light but abolished all pattern and form vision. Observation of these subjects revealed the following: after several hours, directed and organized thinking became progressively more difficult; suggestibility was greatly increased; the need for extrinsic sensory stimuli and bodily motion became intense; most subjects found they could not tolerate the experiment for more than 72 hours; subjects who remained longer than 72 hours usually developed overt hallucinations and delusions. In description these were similar to those reported with mescaline and LSD.

Thus by reduction of patterning of stimuli it was noted that a series of mental abnormalities could be produced experimentally and that in many instances the severity and progression of symptoms could be related to the length of time of the sensory deprivation.

Heron, Doane, and Scott(22) subjected themselves and 5 other subjects to similar experimental conditions for a period of 6 days. All subjects had visual disturbances for 12 to 24 hours after being removed from the experimental situation, as follows: there were fluctuations, drifting, and swirling of objects and surfaces in the visual field; change of position of object occurred with change in eye or head movement; shapes, lines and edges appeared to be distorted; visual after-images were accentuated; colors were very bright and there was exaggeration of contrast phenomena.

Electroencephalograms taken during the period of sensory deprivation revealed slower

frequencies in the alpha range and marked delta wave activity. The records were still abnormal 3½ hours after the subjects were removed from isolation.

Experimental deafness has been reported by Ramsdell (in Hebb)(23) and by Hebb, Heath, and Stuart(24). In these cases cotton wool with petrolatum was placed in the ears of subjects for 3 days. Their chief findings, with marked individual differences, were: inability to speak with normal volume; increased and decreased motivation for studying; marked irritability; exaggerated response to stimuli; desire either to withdraw from situations or to charge into them; feelings of personal inadequacy. There was no evidence of fantasy behavior, though one subject reported that she spoke to a group and no one seemed to hear her.

The reduction of patterning of stimuli has been employed by investigators studying the effects of isolation in the therapy of mental illness(25). These studies, however, are of limited value because of the many variables associated with selection, diagnosis and evaluation of mentally ill patients in an experimental procedure.

The most recent reports of the effects of sensory deprivation involve clinical observations made on a group of 9 patients with poliomyelitis who required treatment in a tank-type respirator(26). In these cases, the mental abnormality began after the patient had been in the tank for 24-48 hours or longer, and was characterized by well-organized visual and auditory hallucinations and delusions to which the patient reacted in different ways and to different degrees. Most of the patients referred to these experiences as dreams. They could recall them in detail even many weeks later. Although many illnesses which affect the nervous system, and indeed many without direct nervous system involvement, are capable of producing abnormality of mental function, they are usually associated with some evidence of a febrile, anoxic, toxic or metabolic derangement. As far as could be determined, there were no such factors in these patients.

The hypothesis formulated was that the abnormality of mental function was related to perceptual isolation or restriction imposed by the unique conditions of life in a tank-

type respirator. The significant findings were:

1. Well-organized delusions and hallucinations occurred only in poliomyelitis patients treated in the tank-type respirator.

2. They required 2-7 days to develop in overt form.

3. The condition lasted 10-15 days and recovery was independent of recovery of motor function or of continued existence in the respirator.

4. In all instances fever was absent, no drugs were being given, and no metabolic aberrations could be demonstrated.

5. Disorientation was the common substrate. The content of the experiences could be pleasant or horrendous, but only rarely was there psychomotor agitation as seen in toxic-infective delirium. In all patients the symptoms were worse at night, and better during the periods for feeding, physiotherapy, and visiting.

6. The patients were able to recall their experiences with great vividness and detail even many weeks after the symptoms ceased. Most of the patients were unable to recall the events of their more lucid intervals in the respirator.

To understand this disorder, it is necessary to consider the unique situation presented by life in a tank-type respirator: vision is restricted to a limited area; the patient never sees any part of his own body; the dominant auditory stimulus in a respirator ward is the rhythmic machine-like sound of the tank motor and the bellows; the patient lies constantly in the same position, and even if not paralyzed, moves his limbs very little.

Thus the patient is restricted in terms of visual, auditory and kinesthetic sensation, and suffers a corresponding degree of perceptual deprivation. This deprivation was different from Lilly's *reduction of the absolute level of stimuli* and Hebb's *reduction of the patterning of stimuli*, though essential elements of both were present. It could be termed an *imposed structuring of stimuli*, for the stimuli the patients received were both unvarying and repetitive, yet were not reduced in absolute level of intensity. Also, form and pattern discriminations were not abolished. This imposed structuring of

stimuli has characteristics analogous to the structuring of the external milieu noted in "brainwashing" techniques, described above.

Recent experiments using human volunteers in a tank-type respirator in our laboratory(27) have added further evidence in confirmation of the effects of perceptual deprivation under these conditions.

At the present time both experimental studies and clinical observations on sensory deprivation need further and more careful investigation. Many factors require additional evaluation and many variables in experimental design and technique must be controlled. Attempts to repeat certain phases of experimental procedure have shown that perhaps even small variations can yield diametrically opposite results. The changes in experimental design utilized by Vernon and Hoffman(28) in attempting to repeat the McGill group's observations illustrate this. These investigators were not able to elicit the findings reported from Hebb's laboratory, as described above, but they admitted they had not employed exactly similar methods. It remains to be determined what items in the experimental situations are the key elements.

In the area of experimental investigation of sensory deprivation, more carefully refined data are necessary before any basic hypothesis can be supported or rejected. Future investigations should attempt to contribute data of both quantitative and qualitative adequacy.

SUMMARY

Sensory deprivation has been produced experimentally by reducing the absolute intensity of stimuli, by reducing the patterning of stimuli, and by imposing a structuring of stimuli. Explorers have experienced it voluntarily and prisoners have had it thrust upon them.

While there are many separate factors operating in these various situations, it is clear that the stability of man's mental state is dependent on adequate perceptual contact with the outside world. Observations have shown the following common features in cases of sensory deprivation: intense desire for extrinsic sensory stimuli and bodily

motion, increased suggestibility, impairment of organized thinking, oppression and depression, and, in extreme cases, hallucinations, delusions, and confusion.

Though the basic concepts regarding perceptual and sensory deprivation are not new, their recent importance in experimental and real life situations has made them increasingly interesting. Future studies in this area may well contribute to our knowledge of the psychological and behavioral patterns of man under conditions of normality and stress.

BIBLIOGRAPHY

1. Byrd, Richard E. *Alone*, New York: G. P. Putnam's Sons, 1938.
2. Bombard, Alain. *The Voyage of the Heretique*, New York: Simon and Schuster, 1953.
3. Ritter, Christiane. *A Woman in the Polar Night*, New York: The Century Co., 1900.
4. Horwath, David. *We Die Alone*. New York: MacMillan and Co., 1955.
5. Slocum, Captain Joshua. *Sailing Alone Around the World*, New York: The Century Co., 1900.
6. Gibson, Walter. *The Boat*. Boston: Houghton Mifflin Co., 1953.
7. Dean, Maj. Gen. W. F. *General Dean's Story*, New York: The Viking Press, 1954.
8. Hunter, Edward. *Brainwashing in Red China*, New York: The Vanguard Press & Co., 1953.
9. Lifton, Robert J. *Am. J. Psychiat.*, 110: 732, April 1954.
10. Schein, Edgar H. *Psychiat.*, 19: 149, May 1956.
11. Lifton, Robert J. *Psychiat.*, 19: 173, May 1956.
12. Orwell, George. *Nineteen Eighty-Four*, New York: Harcourt, Brace Co., 1949.
13. Hinkle, Jr., L. E., and Wolff, H. G. *Arch. Neurol. & Psychiat.*, 76: 115, Aug. 1956.
14. Stypulkowski, Z. F. *Invitation to Moscow*. London: Thames and Hudson, 1951.
15. Meerloo, Joost A. M. *Am. J. Psychiat.*, 110: 809, May 1954.
16. Winokur, George. *J. Nerv. and Ment. Dis.*, 127: 65, July 1955.
17. Santucci, Peter S., and Winokur, George. *Arch. Neurol. and Psychiat.*, 74: 15, July 1955.
18. Burney, Christopher. *Solitary Confinement*, London: Clarke and Cockran, 1952.
19. Walter, W. G. *The Living Brain*, New York: Norton, 1955.
20. Lilly, John C. *Psych. Res. Rept's. No. 5*, 1, June 1956.
21. Bexton, W. H., Heron, W., and Scott, T. H. *Canad. J. Psychol.*, 8: 70, June 1954.
22. Heron, W., Doane, B. K., and Scott, T. H. *Canad. J. Psychol.*, 10: 13, March 1956.
23. Report by Ramsdell, O. in Hebb, I. D. *The Organization of Behavior*. New York: John Wiley and Sons, Inc., 1949.
24. Hebb, D. O., Heath, E. S., and Stuart, E. A. *Canad. J. Psychol.*, 8: 152, Sept. 1954.
25. Azima, G., and Carpenter, F. J. *Dis. Nerv. Syst.*, 17: 117, April 1956.
26. Mendelson, J., and Foley, J. *Trans. Amer. Neurol. Assoc. In Press*, 1956.
27. Wexler, D., Mendelson, J., Leiderman, P. H., and Solomon, P. Unpublished data.
28. Vernon, J., and Hoffman, J. *Science*, 123: 1074, June 1956.

type respirator. The significant findings were:

1. Well-organized delusions and hallucinations occurred only in poliomyelitis patients treated in the tank-type respirator.

2. They required 2-7 days to develop in overt form.

3. The condition lasted 10-15 days and recovery was independent of recovery of motor function or of continued existence in the respirator.

4. In all instances fever was absent, no drugs were being given, and no metabolic aberrations could be demonstrated.

5. Disorientation was the common substrate. The content of the experiences could be pleasant or horrendous, but only rarely was there psychomotor agitation as seen in toxic-infective delirium. In all patients the symptoms were worse at night, and better during the periods for feeding, physiotherapy, and visiting.

6. The patients were able to recall their experiences with great vividness and detail even many weeks after the symptoms ceased. Most of the patients were unable to recall the events of their more lucid intervals in the respirator.

To understand this disorder, it is necessary to consider the unique situation presented by life in a tank-type respirator: vision is restricted to a limited area; the patient never sees any part of his own body; the dominant auditory stimulus in a respirator ward is the rhythmic machine-like sound of the tank motor and the bellows; the patient lies constantly in the same position, and even if not paralyzed, moves his limbs very little.

Thus the patient is restricted in terms of visual, auditory and kinesthetic sensation, and suffers a corresponding degree of perceptual deprivation. This deprivation was different from Lilly's *reduction of the absolute level of stimuli* and Hebb's *reduction of the patterning of stimuli*, though essential elements of both were present. It could be termed an *imposed structuring of stimuli*, for the stimuli the patients received were both unvarying and repetitive, yet were not reduced in absolute level of intensity. Also, form and pattern discriminations were not abolished. This imposed structuring of

stimuli has characteristics analogous to the structuring of the external milieu noted in "brainwashing" techniques, described above.

Recent experiments using human volunteers in a tank-type respirator in our laboratory(27) have added further evidence in confirmation of the effects of perceptual deprivation under these conditions.

At the present time both experimental studies and clinical observations on sensory deprivation need further and more careful investigation. Many factors require additional evaluation and many variables in experimental design and technique must be controlled. Attempts to repeat certain phases of experimental procedure have shown that perhaps even small variations can yield diametrically opposite results. The changes in experimental design utilized by Vernon and Hoffman(28) in attempting to repeat the McGill group's observations illustrate this. These investigators were not able to elicit the findings reported from Hebb's laboratory, as described above, but they admitted they had not employed exactly similar methods. It remains to be determined what items in the experimental situations are the key elements.

In the area of experimental investigation of sensory deprivation, more carefully refined data are necessary before any basic hypothesis can be supported or rejected. Future investigations should attempt to contribute data of both quantitative and qualitative adequacy.

SUMMARY

Sensory deprivation has been produced experimentally by reducing the absolute intensity of stimuli, by reducing the patterning of stimuli, and by imposing a structuring of stimuli. Explorers have experienced it voluntarily and prisoners have had it thrust upon them.

While there are many separate factors operating in these various situations, it is clear that the stability of man's mental state is dependent on adequate perceptual contact with the outside world. Observations have shown the following common features in cases of sensory deprivation: intense desire for extrinsic sensory stimuli and bodily

motion, increased suggestibility, impairment of organized thinking, oppression and depression, and, in extreme cases, hallucinations, delusions, and confusion.

Though the basic concepts regarding perceptual and sensory deprivation are not new, their recent importance in experimental and real life situations has made them increasingly interesting. Future studies in this area may well contribute to our knowledge of the psychological and behavioral patterns of man under conditions of normality and stress.

BIBLIOGRAPHY

1. Byrd, Richard E. *Alone*, New York: G. P. Putnam's Sons, 1938.
2. Bombard, Alain. *The Voyage of the Heretique*, New York: Simon and Schuster, 1953.
3. Ritter, Christiane. *A Woman in the Polar Night*, New York: The Century Co., 1900.
4. Horwath, David. *We Die Alone*. New York: MacMillan and Co., 1955.
5. Slocum, Captain Joshua. *Sailing Alone Around the World*. New York: The Century Co., 1900.
6. Gibson, Walter. *The Boat*. Boston: Houghton Mifflin Co., 1953.
7. Dean, Maj. Gen. W. F. *General Dean's Story*, New York: The Viking Press, 1954.
8. Hunter, Edward. *Brainwashing in Red China*, New York: The Vanguard Press & Co., 1953.
9. Lifton, Robert J. *Am. J. Psychiat.*, **110**: 732, April 1954.
10. Schein, Edgar H. *Psychiat.*, **19**: 149, May 1956.

11. Lifton, Robert J. *Psychiat.*, **19**: 173, May 1956.
12. Orwell, George. *Nineteen Eighty-Four*, New York: Harcourt, Brace Co., 1949.
13. Hinkle, Jr., L. E., and Wolff, H. G. *Arch. Neurol. & Psychiat.*, **76**: 115, Aug. 1956.
14. Stypulkowski, Z. F. *Invitation to Moscow*. London: Thames and Hudson, 1951.
15. Meerloo, Joost A. M. *Am. J. Psychiat.*, **110**: 809, May 1954.
16. Winokur, George. *J. Nerv. and Ment. Dis.*, **127**: 65, July 1955.
17. Santucci, Peter S., and Winokur, George. *Arch. Neurol. and Psychiat.*, **74**: 15, July 1955.
18. Burney, Christopher. *Solitary Confinement*, London: Clarke and Cockran, 1952.
19. Walter, W. G. *The Living Brain*, New York: Norton, 1955.
20. Lilly, John C. *Psych. Res. Rept's. No. 5*, **1**, June 1956.
21. Bexton, W. H., Heron, W., and Scott, T. H. *Canad. J. Psychol.*, **8**: 70, June 1954.
22. Heron, W., Doane, B. K., and Scott, T. H. *Canad. J. Psychol.*, **10**: 13, March 1956.
23. Report by Ramsdell, O. in Hebb, I. D. *The Organization of Behavior*. New York: John Wiley and Sons, Inc., 1949.
24. Hebb, D. O., Heath, E. S., and Stuart, E. A. *Canad. J. Psychol.*, **8**: 152, Sept. 1954.
25. Azima, G., and Carpenter, F. J. *Dis. Nerv. Syst.*, **17**: 117, April 1956.
26. Mendelson, J., and Foley, J. *Trans. Amer. Neurol. Assoc. In Press*, 1956.
27. Wexler, D., Mendelson, J., Leiderman, P. H., and Solomon, P. Unpublished data.
28. Vernon, J., and Hoffman, J. *Science*, **123**: 1074, June 1956.

CLINICAL NOTES

A COMPARISON OF PHENAGLYCODOL (ULTRAN), MEPROBAMATE AND A PLACEBO IN ABSTINENT ALCOHOLICS¹

JACKSON A. SMITH, M.D.,² AVONELL RUTHERFORD, R.N.,³ AND RITA FANNING, R.N.⁴

The major problem in the treatment of the alcoholic is not the immediate relief of the discomfort following an alcoholic bout, but finding a preparation which will prevent the patient's taking the drink which initiates the next episode. A preparation which would decrease emotional lability or afford subjective relief from tension, and which would create no undue hazards of habituation would be very desirable in the treatment of these patients.

For this purpose the effects of two ataraxics and an identical placebo have been compared in the treatment of 45 chronic male alcoholics, 32 of whom were committed to a state mental hospital, and the remaining 13 were seen in an outpatient alcoholic clinic.

Using a "double blind" procedure, the medications and placebo were prepared in identical capsules and were given orally t.i.d. in the following order to each patient for a 2-week period: phenaglycodol 300 mgm., placebo, and meprobamate 400 mgm. Placing the interval during which the patients received the placebo between the two active medications afforded an opportunity to compare both with the inactive substance.

The 32 inpatients were seen following admission to the hospital by a research nurse. Initially, the patient's statements as to his reasons for drinking and evidence of tension or anxiety were recorded as were his sleeping habits, dreams, appetite and ability to retain food. His pulse and blood pressure

were taken and the presence of a tremor, perspiration or restlessness were noted. The medication was then started and 6 weekly interviews were done in the same manner during the study.

Results.—It was planned to compare an equal number of clinic and hospitalized patients, but it soon became apparent that the medication and the brief interview were not sufficient to motivate the clinic patients to return and only 3 of the 13 outpatients completed the course.

Twenty-six of the inpatient alcoholics were believed to have completed the study, 2 escaped from the hospital, one discontinued treatment, and 2 were apprehended discarding the medication. Seven of the 26 who completed the study slept better and were less tense while taking the active preparations than when receiving the placebo. Nine stated they slept better at night, but complained of drowsiness during the day when they were on placebo. Eighteen patients who either slept better, were less tense or had a better appetite, showed the same improved state on phenaglycodol, meprobamate and placebo.

This study reflects the difficulties in evaluating a treatment for chronic alcoholism. The inpatients improved after admission and attributed their improvement to the medication, but they showed no significant change when an identical placebo was substituted nor when a second active compound was added. Several others became drowsy or improved on an inactive placebo.

The outpatient group emphasizes the importance of motivation; it is likely that a larger number would have completed the study if a better relationship had been established with the patients. It is equally likely that the resulting prolongation of their

¹ This study was generously aided by a grant from Eli Lilly & Co. All the medications used in this study were furnished by Eli Lilly & Co.

² Director of Research, Nebraska Psychiatric Institute, Omaha, Neb.

³ Research Nurse, Hastings State Hospital, Ingleside, Neb.

⁴ Nurse, Research Ward, Nebraska Psychiatric Institute, Omaha, Neb.

abstinence would have been the result of the relationship rather than the tranquilizer being given.

In this "double-blind" study of a group of 45 chronic alcoholics treated during their

abstinent period, there was no significant clinical change observed in their behavior nor in their subjective state, whether they were receiving phenaglycodol, meproamate or placebo.

THE MECHOLYL TEST AS A PREDICTOR OF IMPROVEMENT IN INSULIN COMA THERAPY

HARRY VANDERKAMP, M.D.,¹ ANNE NORGAN, M.D., GLADYS W. WILKINSON, R.N.,
AND DAVID PEARL, Ph.D.

The present study aimed to assess the prognostic value of various mecholyl chloride reaction indices for insulin coma therapy with emphasis on immediate improvement rather than on the long range effectiveness of treatment. Previous investigators of this test have relied primarily on systolic blood pressure changes as a criterion. Since these are influenced by many extraneous factors, other potentially useful variables such as pulse rate and diastolic blood pressure changes, sweating, salivating, flushing, pupillary changes and global reactivity were also employed. Serum cholinesterase levels were also evaluated.

Subjects were 125 male schizophrenic patients referred for insulin coma therapy. Prior to insulin treatment, basal blood pressure and pulse rate measurements were taken following which subjects were given a 10 mg. injection of mecholyl in the deltoid muscle. Systolic, diastolic blood pressures and pulse rates were gauged at 2, 5, 7, 10, 12, 15 and 20 minutes following the injection. Sweating, salivating, flushing, pupillary change and global reactivity were separately rated on five point scales with gradations ranging from no change to marked responsiveness. From this larger group, only those patients were utilized who subsequently completed 30 or more insulin comas. Seventy-five subjects meeting this criterion were then rated on a five point scale of improvement by the insulin ward physician who had no knowledge of these patients' responsiveness to mecholyl chloride.

Correlational and Chi square analyses of the relationship of mecholyl reactivity varia-

bles and insulin improvement were carried out. Both pulse rate and systolic blood pressure deviations from basal measurements were significantly related to the extent of therapeutic change, whereas diastolic blood pressure alterations were unrelated. Pulse rate deviations generally show higher correlations than systolic blood pressure measurements. The magnitude of correlation for both variables rises and then diminishes as the time interval following drug injection increases. Maximum correlations occur after 7 minutes, pulse rate deviations correlating .63 and systolic blood pressure deviations -.34 with insulin improvement. The maximum pulse rate deviation shows a significant correlation of .37 with improvement, a relationship not found for maximum systolic blood pressure changes.

Such variables as sweating, salivating, flushing and global reactivity were found to be significantly related at the P.05 level to insulin improvement categories. Global reactivity correlated +.70 with improvement while each of the other three variables correlated .42. Multiple correlations of improvement, pulse rate deviation and various of the other variables were not significantly greater than the simple correlation between pulse rate and improvement.

When subjects were grouped into systolic blood pressure categories according to criteria enunciated by other users of the test, patients fell into two major groups, one of category II and III subjects and the other of category V and VI subjects. A tetrachoric correlation of .40 was found between these categories and insulin improvement, category V and VI subjects showing significantly greater improvement than the others.

¹ Veterans Administration Hospital, Battle Creek, Mich.

No significant differences were found between improved and non-improved subjects for cholinesterase delta ph units and a biserial correlation of .02 was determined between improvement and this variable.

Results suggest strongly that the mechoyl test has prognostic value for improvement in insulin coma therapy and that the commonly utilized variable of systolic blood

pressure changes have a lesser relationship to improvement than several other measures. The pulse rate deviation variable being relatively objective and reliable, is probably the best index. In this study its predictive power was significantly greater than the Funkenstein test index of systolic blood pressure groupings, suggesting its possible value for prediction of improvement with other therapies.

UNEXPECTED ASPHYXIAL DEATH AND TRANQUILIZING DRUGS

LEO E. HOLLISTER, M.D.¹

Two recent contributions to this journal have suggested that tranquilizing drugs were responsible for asphyxial death in some patients (1, 2). A plea was made for further information about this possible complication of tranquilizing therapy.

In Table I, I have compiled all the unexpected asphyxial deaths at a 1325-bed neu-

ropsychiatric hospital in the past 6½ years. This sample is complete since any unexpected death comes to autopsy. Deaths from aspiration pneumonia terminating a long downhill course were excluded. Only those cases were included in which either the mode of death or its time was not expected. The midpoint of the series, 1954, was the year in which tranquilizing drugs were started on a large number of our patients.

This type of death has been no more com-

TABLE 1

UNEXPECTED ASPHYXIAL DEATHS IN 1325-BED NEUROPSYCHIATRIC HOSPITAL, 1951-1957

	Age/Sex	Psychiatric diagnosis	Contributing factors	Tranquil. drug.
1951				
50 autopsies	67 Man	CBS, syphilis		
	56 Man	CBS, arterioscl.		
	54 Man	CBS, epilepsy		
	38 Man	Schizophrenia	Aspirated tube feeding	
	53 Man	CBS, epilepsy	Status epilepticus	
	54 Man	CBS, pre-senile		
1952				
29 autopsies	67 Man	Schizophrenia	Aspirated foreign body	
	64 Man	CBS, syphilis	Seizures	
1953				
35 autopsies	31 Man	CBS, trauma	Seizures	
	52 Man	CBS, pre-senile	Seizures	
1954				
29 autopsies	46 Woman	Brain tumor	Previous episodes aspiration	
	82 Man	Schizophrenia	Aspirated tube feeding	
1955				
22 autopsies	43 Man	Schizophrenia	Seizures, post-leucotomy	CP 400 mg/day
	29 Man	Schizophrenia	Acute alcoholism, vomiting	
	60 Man	CBS, epilepsy		
1956				
25 autopsies	64 Man	CBS, arterioscl.	Previous episodes aspiration	
	41 Man	Schizophrenia	Seizures, post-leucotomy	
1957				
12 autopsies	66 Man	CBS, syphilis	Previous episodes aspiration	PCP 40 mg/day
	34 Woman	Schizophrenia	Seizures, post-leucotomy	CP 1600 mg/day

¹From the Veterans Administration Hospital, Palo Alto, California. Leo E. Hollister, M.D., Chief of Medical Service.

mon during the period of tranquilizing drug therapy than before. What is particularly noteworthy is the high incidence of asphyxial death in patients with brain damage, particularly those with convulsive disorders. Such an association of brain damage and unexpected asphyxial death was clearly present even before tranquilizing drugs were used.

Of the 3 patients who died while on tranquilizing drugs, only 2 deaths raised the possibility of tranquilizing drugs being a contributory factor. The 66-year-old syphilitic who died in 1957 had had numerous near-fatal aspirations prior to being placed on prochlorperazine. The 43-year-old man who died in 1955 appeared to have drowned during a convulsion while swimming. He had been receiving chlorpromazine without any previously noted increase in seizure frequency. The 34-year old woman who died in 1957 had been on intensive chlorpromazine therapy. The day before her death she had a seizure (though she had others recorded before receiving chlorpromazine) and was placed on anticonvulsants. The following day she was found dead less than an hour after the evening meal. Although food particles were present in her trachea, the amount was insufficient to have caused major obstruction. Death was attributed to glottal

spasm from a seizure and irritation from aspirated food.

In some of the previously reported deaths of this type, the possibility of a concomitant seizure was entertained. Since it is perfectly possible for patients to die from asphyxia in seizures, without any tranquilizing drugs, the problem is to decide in what way tranquilizing drugs might influence the frequency of this complication. The most logical possibility is that these drugs (reserpine or rauwolfia alkaloids, chlorpromazine or other phenothiazine derivatives) may induce seizures. Many reports already in the literature attest to seizures being either aggravated or produced *de novo* by these agents. The only study of the effect of long-term drug therapy with reserpine on the swallowing mechanism showed no impairment when an objective test was used (3).

The moral seems to be: the risk of using tranquilizing drugs may be increased in brain-damaged patients or those with known seizures. This increased risk should be measured against the potential benefit from the drug.

BIBLIOGRAPHY

1. Wardell, D. W. *Am. J. Psychiat.*, 113: 8, 1957.
2. Feldman, P. E. *Am. J. Psychiat.*, 113: 1032, 1957.
3. Fogel, E. J. *Dis. Nerv. System*, 17: 332, 1956.

HISTORICAL NOTES

I REMEMBER C. K. CLARKE

1857—1957

It may be that only a few veterans in psychiatry will remember that Canada owes her most eminent figure in this field to a murder.

As 1957 marks the hundredth anniversary of the birth of Charles Kirk Clarke it is a proper time to refresh our memories of this remarkable man.

It was during the asylum epoch, when psychiatry was exclusively state medicine, when politicians exploited the institutions for the insane, and when the superintendents of these institutions were political appointees. This is not to say that there were no good men as heads of the asylums. Dr. Clarke—"C. K." as we respectfully clipped his name—was especially fortunate in his first appointment in the provincial service to come under the influence of a man (Dr. Joseph Workman, superintendent of the first asylum in Ontario, located at Toronto), to whom he always paid homage as a great leader who had helped more than anyone else to shape his own professional career.

The chain of events leading to Clarke's adoption of psychiatry for a career was like this: 1. Senior assistant Metcalf at the Toronto Asylum took a warm interest in young Clarke and the two became close friends; Metcalf later married Clarke's sister. 2. In due course Metcalf was sent as superintendent to the Asylum at Kingston, Ontario where a heavy task of reorganization awaited him. 3. Clarke, who in the meantime had become assistant superintendent at the Hamilton Asylum, was detailed to Kingston in a similar capacity, where he and Metcalf combined their efforts to bring some kind of order into asylum practice. 4. After 3 years in Kingston Clarke had had 11 years experience of the deplorable state of asylum affairs under political control and he decided to quit. "I love psychiatry but hate politics," he said. His resignation was in the hands of the government. 5. It was now 1885. Clarke and his

chief are making ward rounds. A patient rushes at them and stabs Metcalf fatally. Metcalf was 38 years old, Clarke 28. 6. At the request of the government Clarke withdraws his resignation and takes over his dead chief's job. Having put his hand to the plough he now resolves to see it through to the end of the furrow.

My first acquaintance with Dr. Clarke was during the meeting of the British Medical Association in Toronto in 1906. At this time C. K. was the head of the institution where he had served his apprenticeship under Workman. One of the notable features of that meeting was a visit to the Toronto Asylum where it was possible to observe the improvements and new features that had been inaugurated under the wise administration of Dr. Clarke. That evening he entertained at dinner guests from Britain and the United States.

The great versatility of Dr. Clarke is reflected in the variety of positions he was called upon to fill. Thirty-seven years he had given to the provincial hospital service, 26 of these years as superintendent, during which he set the pattern for modern mental hospital organization and administration. About the turn of the century, there was developing in his mind the concept of a psychiatric hospital affiliated with the University of Toronto, where not only clinical study and treatment but also training and research might be carried on. Here would have been the first such clinic in the country. Dr. Clarke's forward looking plans and forthright criticism of reactionary and *laissez-faire* policies aroused jealousies and obstructionist activities in the service and among the politicians. Before action could be taken came the explosion of World War I and the dream, which if realized would have been a conspicuous monument to C. K.'s superior leadership, failed of fulfillment.

Meanwhile the University had made him

the first professor of psychiatry (1906), and dean of the medical faculty (1908-1920). Next came the request that he accept the superintendency of the newly created Toronto General Hospital and in 1911 he left the provincial service to assume that position, which he held through World War I. In the absence of the head of the department of psychology on military service, Dr. Clarke had charge of that department as well as of the department of psychiatry.

When the Canadian National Committee for Mental Hygiene—now the Canadian Mental Health Association—earliest offspring of the parent organization in New York City, was founded in 1918, C. K. became the first medical director and continued in that office while he lived. He also created the pioneer outpatient psychiatric clinic at the Toronto General Hospital. During the last 20 years of his life he was a member of the editorial board of this JOURNAL, the first Canadian to be elected to the board.

To go back a little, one of Dr. Clarke's earliest measures to improve the condition of hospital patients, dating from his first superintendency in 1885, was the establishment of a very practical form of occupational therapy. He set up at Kingston shops for various industries, chiefly broom and brush making. Here many patients were employed and soon Kingston was supplying these utensils not only to the other asylums in the province but to the open market as well. Of course the inevitable happened. Organized labour raised a howl that this was unfair competition. The howl reached the ears of parliamentarians in Toronto and instructions were sent to Dr. Clarke to curtail his mischievous activity in providing healthful occupation for his patients. Politics again!

Clarke was not only a medical statesman and a great humanitarian; it is fair to call him the father of Canadian psychiatry. He was a man of many interests; he was a proficient musician and organized his own string quartette. He even designed and built a pipe organ which was long in use. Near to his heart was the welfare of students and as dean of the medical faculty of the University of Toronto he was the beloved friend of

the students of that faculty. The lighter side of their life was represented by an annual performance staged by them in the university theatre. It was—and is—called Daffydill and, like *Twelfth Night*, was "What You Will." For once in the year the students could with immunity poke fun at their professors in public. Those professors, more than likely, were there to enjoy the jokes at their expense. Certainly C. K. was there. Indeed he was a promotor of Daffydill and contributed to the program.

Dr. Clarke was vitally interested in problems of immigration and was disturbed by the inefficient control or lack of control of the influx of undesirables from Europe. At his request Professor W. A. Smith of the department of psychology at the University of Toronto undertook a detailed study of Canadian immigration. This work was published in book form in 1920. In his introduction to this book Dr. Clarke characterized the record as "a chapter of tragedy and mismanagement." He condemned in strong, if not always diplomatic language, the inadequacy of immigration regulations. "It has ever been true that the failures of the old world have sought and have been encouraged to seek pastures green in the new world, without the slightest consideration of the reasons why they have not succeeded at home. . . . Those of us who are making surveys of thousands of school children, have long ago learned, however, that the descendents of these poor types fall far below the average and are simply adding to our anxieties rather than helping to build up a healthy people." One wonders what Dr. Clarke would say if he were available for comment on present conditions of immigration.

My most intimate association with C. K. was during a tour of inspection of the mental hospitals of the Dominion during World War I. Returned soldiers with psychiatric disabilities and needing further hospital treatment had at first been sent to their home provinces to be cared for in the provincial institutions. The federal department responsible for the disposal of invalided soldiers, then known by the mouth-filling title, Department of Soldiers' Civil Re-establishment, required a report on all matters relating to these vet-

erans scattered across Canada. It was desirable that one inspector outside the government should be engaged; Dr. Clarke was the obvious choice, and it was my privilege, as chief psychiatrist for the Department, to be associated with him on this tour. Beginning with British Columbia, institutions in the 4 western provinces were comfortably surveyed, provincial and hospital authorities offering every possible assistance. In Winnipeg word reached us that Dr. Clarke would not be permitted to visit any of the Ontario hospitals. In his home province which he had served so faithfully and so long and with such splendid results he was *persona non grata* as far as the government of the day was concerned.

One of Dr. Clarke's last public functions was the delivery of the Maudsley Lecture on psychiatry before the British Medico-Psychological Association in London. He was the only Canadian to whom this honour had fallen.

Born in 1857 C. K. died much too soon in 1924. Visiting him in his final illness I found him sitting up in bed busily engaged in constructing a hammock destined for a special use. He was one who could do things with his hands as well as with his head. He talked of the work of his department, and future plans just as if he might be carrying out these plans himself. He spoke of the psychiatric clinic he had hoped to see built before World War I, and of his plans for its organization. It was a touching moment when he said that he had nominated me as his successor.

At the memorial service in the University's great convocation hall it was the president, Sir Robert Falconer, who paid the tribute. His first sentence he spoke slowly and let it stand alone for a few seconds: "Charles Kirk Clarke was a good man."

His friends who listened knew the profound meaning of those words.

C. B. F.

DISCIPLINE OF THE EMOTIONS

"Refuse to express a passion, and it dies . . . on the other hand, sit all day in a moping posture, sigh, and reply to everything with a dismal voice, and your melancholy lingers. There is no more valuable precept in moral education than this . . . if we wish to conquer undesirable emotional tendencies in ourselves, we must assiduously . . . go through the *outward movements* of those contrary dispositions which we prefer to cultivate. The reward of persistency will infallibly come. . . . Smooth the brow, brighten the eyes, contract the dorsal rather than the ventral aspect of the frame, and speak in a major key, pass the genial compliment and your heart must be frigid indeed if it do not gradually thaw!

—WILLIAM JAMES

CORRESPONDENCE

ELECTROSHOCK AND HYPOTHALAMIC SYNDROME

Editor, THE AMERICAN JOURNAL OF PSYCHIATRY:

SIR: In the June 1957 issue Dr. John C. Pollard reported a case showing an unusual hypothalamic syndrome with complete vasomotor collapse following electroshock therapy. The effect of EST on the autonomic nervous system has been of interest to me for some time. In a paper appearing in the *Psychiatric Quarterly* (Observations on Electric Shock Treatment, *Psych. Quart.* 17, 327-336, April 1943) I reported two patients with symptoms attributed to irritation of the autonomic nervous system, one of whom showed severe emaciation, multiple skin abscesses not responding to surgical treatment,

and trophic changes of nearly all fingers and toes, and died within two months after termination of EST. My conclusion was that EST produces severe stimulation of the autonomic nervous system.

A search of the literature, as Dr. Pollard has stated, fails to reveal additional cases, although it seems likely that other investigators might have had similar experiences. Much of the improvement brought about by electroshock and its more recent modifications can be explained by its effect upon the vegetative nervous system; similarly, it can be readily understood that adverse reactions are also possible.

KURT NUSSBAUM, M. D.,
Baltimore, Md.

BENACTYZINE (SUAVETIL)

Editor, THE AMERICAN JOURNAL OF PSYCHIATRY:

SIR: I have read with interest Doctors Vernon Kinross-Wright's and John H. Moyer's article in *The American Journal of Psychiatry*, 114: 73, July, 1957, describing their experience with the tranquilizer benactyzine (Suavetil).

About two years ago Lloyd, Dabney & Westerfield Laboratories were kind enough to let me try benactyzine in my general psychiatric practice. I tried it for over a year in over 80 patients, including all types of psychiatric cases, and came to the same con-

clusions that Doctors Kinross-Wright and Moyer did.

It was occasionally effective in reducing anxiety and tension in emotionally disturbed patients. So many of the patients reported atropine type side-effects, however, that it was difficult to get them to continue medication in sufficient dosage to give them much symptomatic relief. After a year's trial with benactyzine, it was discontinued as being less effective than other tranquilizers and objectionable to the patients because of its side-effects.

FREDERICK LEMERE, M. D.,
Seattle, Wash.

DRUG FATALITIES

Editor, THE AMERICAN JOURNAL OF PSYCHIATRY:

SIR: This letter refers to Paul E. Feldman's case report, "An Unusual Death Associated With Tranquilizer Therapy," in the

May 1957 issue of *The American Journal of Psychiatry*.

The following case report is from the psychiatric division of the Kings County Hospital Center, Brooklyn 3, New York. It suggests, as did Dr. Feldman's report, the

failure of the cough reflex to respond adequately to foreign material in the trachea.

Case History.—A 30-year-old schizophrenic female was hospitalized on April 8, 1957. The onset of her mental illness was relatively acute. Clinically, hyperactivity, agitation, hypochondriacal delusions and hallucinations were observed. At the time of admission and for most of her hospitalization she remained agitated, had a low-grade fever (100-100.6 rectally) and sinus tachycardia. The remainder of her physical examination and laboratory tests including blood urea nitrogen determination, complete blood counts and urinalysis were within normal limits. Chest and thoraco-lumbar vertebrae X-ray studies were normal.

Thorazine, 200 mgm. q.i.d. by mouth was begun on April 10, 1957. There was no untoward initial response to the drug. On the day of the patient's

death she had her last dose of Thorazine at 2 p.m. At 6 p.m., shortly after the patient had dinner she was observed in the day hall markedly dyspneic and struggling to keep from falling to the floor. She then collapsed, her pulse was unobtainable and she died in a matter of minutes.

The significant autopsy findings were marked congestion of the trachea and bronchi, with a thick gruel-like substance along the trachea, bronchi and running down into the smaller bronchioles.

I believe Dr. Feldman's calling attention to the possible adverse effects of ataractic drugs on the respiratory system is important for all physicians who employ such therapy.

IRVING J. FARBER, M.D.,
Forest Hills, New York.

WAGNER-JAUREGG

Editor, THE AMERICAN JOURNAL OF PSYCHIATRY:

SIR: Being a pupil and great admirer of Wagner-Jauregg, I was very pleased that you commemorated his 100th birthday (Am. J. Psychiat., June 1957). I would like to add a few facts, interesting especially for Americans.

It was Wagner-Jauregg who introduced postgraduate courses for foreign physicians and he is the originator of "The American Medical Association of Vienna" which brought about an important exchange of medical knowledge and culture between both countries.

Wagner-Jauregg was also the first to recognize the significance of radiology and worked actively for the establishment of a

central institute for x-rays. Many of the internationally known founders of radiology, a science whose importance is now more evident than ever, came from this institute.

After Wagner-Jauregg's retirement, Otto Poetzl, a former associate, succeeded him. Another associate, Josef Gerstmann, Wagner-Jauregg's closest collaborator of many years, especially in the field of malariatherapy, lives now in New York.

Wagner-Jauregg's memoir, *Julius Wagner-Jauregg, Lebenserinnerungen* (Reviewed in this JOURNAL July 1952, pp. 73) by L. Schoenbauer and M. Jantsch (Wien: Springer Verlag, 1950), gives an excellent picture of his personality and work.

EDITH KLEMPERER, M.D.
New York City.

ELECTROSHOCK THERAPY

Editor, THE AMERICAN JOURNAL OF PSYCHIATRY:

SIR: I would like to make a few comments in reply to the letters by 1. Edwards and Listwan; 2. Impastato; 3. Marshall, in the July 1957 issue of the JOURNAL.

Referring to our experiences at Pinewood, we have, with our own modifications, followed Impastato's method of a muscle relaxant plus a subconvulsive shock prior to the convulsive treatment. Our equipment is

Reiter's unidirectional machine, Model RC-47D and Reiter's Mol-ac II machine with anectine the muscle relaxant. As a routine we prescribe in new cases 5 mgms. of anectine, increasing the dosage per treatment as rapidly as we feel necessary until the desired effect is attained. Approximately 10 seconds after the injection, a subconvulsive shock is administered and this is followed, in about 15 to 30 seconds, with the convulsive shock. Occasionally this latter period must be

lengthened in order to obtain the desired effect, but in the majority of cases the shorter period is effective.

We have not found it necessary to prescribe sodium amytal prior to the treatment procedure. Pinewood is a private hospital where treatments are given in the patients' rooms and pre-treatment anxiety is comparatively uncommon instead of being the rule.

We do not use oxygen before the convulsive stage, nor do we use it following treatment in the majority of cases. It has been found that under ordinary circumstances respiration begins fairly promptly after the treatment. In any group of patients however, there are always some who require oxygen to prevent anoxia. On the whole, respiration is delayed as frequently with intravenous sodium pentothal as with anectine.

Our use of intravenous pentothal for the purpose of eliminating anxiety has been practically eliminated. It has been found that in addition to anectine being much simpler to inject (due to the smaller amount

of the drug), some anesthesia is produced, or appears to be, and the patient lies quietly and is seemingly unaware of the situation. Shortly however, the drug begins to cause restlessness and at this point the subconvulsive treatment is administered. This subconvulsive treatment definitely anesthetizes the patient certainly as effectively as the pentothal and in addition it creates a post-treatment amnesia. Our contention is that it is not at all necessary to use a chemical anesthetic, or that legal hazards or cheapness are factors in the use of subconvulsive treatment. In addition to being effective and simpler, it appears to be less dangerous than the use of pentothal, which occasionally causes delayed respiration and also seems to lessen the effect of the shock treatment.

To reiterate, it is our opinion that subconvulsive treatment is a safe, satisfactory and adequate anesthetic in electroshock therapy.

WALTER A. THOMPSON, M. D.,
Clinical Director Pinewood Hospital,
Katonah, New York.

SELF-DISCIPLINE

Mistakes, misunderstandings, obstructions, which come in vexatious opposition to one's views, are always to be taken for just what they are—namely, natural phenomena of life, which represent one of its sides, and that the shady one. In overcoming them with dignity, your mind has to exercise, to train, to enlighten itself; and your character to gain force, endurance, and the necessary hardness. . . . Never to relax in putting your magnanimity to the proof; never to relax in logical separation of what is great and essential from what is trivial and of no moment, never to relax in keeping yourself up to a high standard in the determination, daily renewed, to be consistent, patient, courageous.

—BARON STOCKMAR TO PRINCE ALBERT
(In Lytton Strachey: Queen Victoria)

COMMENT

IDEA AND ACT

From college days comes the recollection that in elementary courses in psychology we learned something about how a sense impression, energizing a neurone circuit, leads to a motor response. The process could be represented graphically. It was a picture of how an idea may spring into action. We learned also that the response might not be immediate; it might be long delayed, germinating in the mind as an idea—an image of the act—until eventually it ended as the act itself. The motor response might, of course, never take place if there were strong enough counter impulses to inhibit it; but if the climate of the mind were favorable, and if the sensory stimuli of the spoken or written word were vigorously reiterated, the motor response, if not indeed probable, at least could not be discounted. It might partake of the nature of a conditioned reflex. Thus it could be shown that, with certain exceptions which need not engage us here, before an act took place there would normally be in consciousness an idea of that act.

Later on, when we gained some acquaintance with criminology, we learned about the *mens rea*. This *mens rea* was just the old germinal idea that elementary psychology taught, only this time it was a wrongful or criminal idea. And if a person who had committed a crime was to be held accountable and punished, then it must be shown that the antecedent *mens rea* was there. If it was held that there was no *mens rea*, we would have one of those exceptions mentioned above and the accused would be adjudged not guilty of a criminal act.

In any case, lawful or unlawful, the thesis is that an overt act is the terminal fact in a causal sequence, and that in general the act follows upon and is a consequence of the idea, which was a mental image of the act.

It seems to follow that *mens rea*, however it germinates, is a dangerous thing, but that when it is specifically implanted in the mind by indoctrination and as part of a credo that has the nature of a religion, its threat be-

comes ominous. The teaching of Communism is fairly well known, and there are examples enough over there of the idea-action sequence.

In 1940 the Congress of the United States passed the Alien Registration Act, commonly known as the Smith Act. This act has not been repealed. One of the clauses makes it a crime to "advocate overthrowing any government in the United States by force or violence." In 1949, after a jury trial that lasted 9 months, 11 leaders of the Communist party were convicted of conspiracy to advocate overthrow of the Government by force and were sentenced to prison terms and fines. In 1951 the United States Supreme Court ruled that the convictions were valid and that the Smith Act as applied in the case was constitutional. The vote was 6 to 2.

During the interval since, 145 Communists have been indicted and 89 have been convicted under the Smith Act. Fourteen of these carried their cases to the Supreme Court, and in June 1957 the Court set aside their convictions. The ruling was based on arguments that the majority of the Justices conceded were "often subtle and difficult to grasp." Justice Clark dissented from the decision, stating that the distinctions were too "subtle and difficult" for him to grasp.

In its 1957 decision the Supreme Court did not repudiate the Smith Act but in interpreting it performed an extraordinary feat of psychological acrobatics. This feat consisted of a gossamer-fine distinction between "advocacy of abstract doctrine" and "advocacy directed at promoting unlawful action." According to this dialectic, "teaching of forcible overthrow as an abstract principle, divorced from any effort to instigate action to that end" is quite permissible, and presumably the High Court is prepared to defend such teaching. And so we come back to our original question—that of the relations of the idea (whether qualified as "ab-

stract" or not) to the act, and of the *mens sana* which is harmless to the *mens rea* which is criminal. Who is capable of drawing the fine distinction between the state of mind of one who teaches the commission of a crime

as a mere "abstract principle" which is declared to be lawful and the state of mind of one who commits that crime or instigates its commission? The argument is indeed "subtle and difficult to grasp."

INFORMATION VALUES

Psychiatry is presently more in the news than ever before. This may not mean much since there are other fields of knowledge as well as of ignorance about which newspapers are printing much more than the somewhat neutral bystander could expect and digest. There are now many more people who have learned to read than in times past, and there are radio and TV.

As regards psychiatry a few facts stand out which I want to mention. The old hostility to psychiatry is still alive. Psychiatric institutions and psychiatrists are still considered with outspoken prejudice. There is the notion that patients once taken care of by psychiatrists are more or less "goners." Whoever is known to be in psychiatric treatment is adjudged crazy by certain groups of our society; the compliment is occasionally extended to the therapist, for "who, after all, would deal with crazy people unless he were crazy himself?"

At the same time within psychiatry great efforts are made to train more and more psychiatrists, and, of course, to train them well. It is figured out statistically that the ratio of psychiatrists to population is unsatisfactory. A continued increase of persons needing psychiatric treatment is expected and predicted.

Streams of literature coming from two sources unite in the attempt to enlighten people. This is the popular literature in which the public is told all manner of things concerning psychiatric disturbances and abnormalities. The two sources are the professional (psychiatric) and the lay writers who in the make-up of their articles and books show unmistakable similarities, e.g., the readiness to impress their readers with sensational material connected with the expectation to appear on the best seller list. It is impossible to find out which of the two sources is doing more harm. Only too often the writers do not show common sense; Dr. Alvarez,

a physician of undeniable common sense has repeatedly made remarks with sarcastic humor about this deplorable lack. (This observation does not imply that I am particularly enthusiastic about Dr. Alvarez's column.)

It is easy to pick out a particular school of medical psychology and make it responsible for the whole dilemma. If such schools were not gratifying certain needs they could not have become so successful as they still are. And, logically, if those sensational products in printer's ink were not greedily "bought" by a rather large portion of the social group, much of that ink would be spared.

We read about successes in psychotherapy, physical therapy, and research before the pertinent data have been collected and evaluated. A goodly number of non-psychiatrists pretend and probably believe that they know much better than the psychiatrists. The very reserve and reluctance of the professionals who are not willing to spill unripe beans gives those outsiders a welcome start.

All this would be irrelevant and would best be ignored if there were not all those hopes raised that cannot be fulfilled. Patients come or are brought to psychiatric offices and hospitals not only with ready made diagnoses, but with the request for a certain type of therapy, e.g., shock treatment, concerning which they or/and their relatives have been informed through the kind of literature under consideration here. The Miltown epidemic, incidentally, was a case in point of inept, unprofessional information and its abuse.

Can anything be done about this situation? One may think that the agencies devoted to world, national and municipal mental health and mental hygiene have the task to gather and to distribute valid information. However, who decides what information was or is or will be valid? It is obvious that these agencies ought to receive their information from

reliable psychiatrists and psychiatric institutions. Who decides which psychiatrists and which psychiatric institutions are reliable? Who can hinder an all too eager young doctor from talking about "developments" as though the aims of pertinent labors were already reached?

I shall not attempt to answer these questions. But I shall make one recommendation. It is easy to talk about "ethics"; it is not quite so easy to keep a host of professional workers within ethical bounds. It is possible,

though, to remind members of the group of their moral obligations, and it is desirable and feasible to warn them to be utterly cautious in their pronouncements. What a blessing it would be if the publication of books which are neither bona fide literary works nor scientific treatises were stopped! It appears to me that this would be apt to do something to de-ridicule contemporary psychiatrists and psychiatry.

EUGEN KAHN, M. D.,
Galveston, Tex.

CALIFORNIA MENTAL HEALTH SERVICES

The California Department of Mental Hygiene reports the release rate of patients from the state hospitals increased by 31% during the decade 1947-1956. This increase was attributed to several factors including: an increase in the ratio of hospital workers to patients; an increase in professional staff trained in psychiatric therapeutic techniques; improved material facilities designed specifically to provide treatment, not only of the acutely mentally ill patient, but also of those who may be physically ill or handicapped. Other contributing factors include the application of the more recent advances in drug therapy, an increased public awareness of the needs of patients when released to communities, and corresponding public co-operation.

The admission rate per 100,000 of the population declined from 135 in 1953 to 129 in 1956 although the total state population increased 13% in that period. During that same four-year period the resident hospital population rate per 100,000 of the general population declined from 297 in 1953 to 275 in 1956. Coupling this trend with that of the currently projected new facilities, the

department expects that the present overcrowding of the state hospitals will be brought to an end by the fiscal year 1960-61.

The department's budget for the fiscal year 1957-58 totals \$110 million. Of this amount, \$92.5 million includes a substantial increase in the level of personal services for existing hospitals and provides for the operation of newly completed facilities; expansion of family care services; continued planned research; and the establishment of additional outpatient care, including a "day-night" care program. The budget also projects \$18.5 million for the development of additional hospital facilities.

The significance of this comment may be better appreciated when it is realized that 16 years ago the California state hospitals were custodial institutions, without special facilities or personnel for the intensive treatment of the acutely mentally ill. No community mental health facilities existed and no organized effort to train or teach personnel existed west of the Rockies.

W. L. T.

Convictions are more dangerous enemies of truth than lies.

—NIETZSCHE

NEWS AND NOTES

PUBLIC HEALTH MISSION TO RUSSIA.— Leroy E. Burney, Surgeon General of the Public Health Service, reports that 5 United States public health physicians departed August 13 on a 4-week exchange mission to the USSR. Chairman of the mission is Dr. Thomas Parran, Dean, Graduate School of Public Health, University of Pittsburgh, and a former Surgeon General of the Public Health Service. This mission was arranged by the Public Health Service, in co-operation with the U. S. Department of State. The visit will provide opportunities for closer contacts between public health and medical leaders of the 2 nations, and will facilitate the exchange of technical information in health fields.

The American physicians will visit cities and villages in 5 of the 15 republics of the USSR in Europe and Asia. They will visit the Union Ministry of Health, city health departments, hospitals, dispensaries, industrial medical services, research institutes, and medical schools. A reciprocal Soviet Union public health mission will visit the United States in October.

POSTGRADUATE CENTER FOR PSYCHOTHERAPY.—In October 1957 the Postgraduate Center for Psychotherapy (218 E. 70th St., New York City) will initiate a series of International Seminars in the field of mental health by presenting Dr. W. Grey Walter, internationally renowned British neurophysiologist. Speaking on "Brain and Behavior," Dr. Grey Walter will address an open meeting at the New York Academy of Medicine at 8:00 p.m. on October 23, 1957. He will also lead two other seminars, on October 20 and 31; the subjects will be "The Physiology of Personality" and "The Cybernetic Approach to Mentality and Society." At the third meeting he will demonstrate his "electronic turtle," one of the models he designed and built for the study of nerve mechanisms.

W. Grey Walter, one of the pioneers in the development of electroencephalography,

is the inventor of a number of electronic models of nerve mechanisms, including the Conditioned Reflex Analogue which responds to an association of ideas or stimuli by a process of apparent anticipation.

DEATH OF DR. LOWREY.—With great regret we have to announce the death of our associate editor, Lawson G. Lowrey, on August 16, 1957. His death was due to a coronary occlusion. Dr. Lowrey had been a member of the editorial board since 1951 and brought to us the benefit of his considerable previous editorial experience. His loyal co-operation has been invaluable. A memorial notice and biographical sketch will appear in a later issue of the JOURNAL.

REGIONAL RESEARCH CONFERENCE, MONTREAL.—The American Psychiatric Association will hold its 6th Regional Research Conference in Montreal under the auspices of McGill University on Friday and Saturday, November 8 and 9, 1957. Final details of the program will be announced later. Invitations are being sent to all psychiatrists in Ontario, Quebec and the Maritime Provinces, and in northern New York State and northern New England.

Those wishing to submit papers or to suggest topics for discussion should communicate promptly with Dr. D. Ewen Cameron, chairman of the department of psychiatry, McGill University.

Three half-day sessions will be devoted to papers and the fourth to audio-visual presentations. The general topics at present under discussion are: 1. communications; 2. remembering; 3. effects of repetition of verbal signals on behavior; 4. object relations; 5. time and timing as pathogenic agents.

INFORMATION FOR RELATIVES OF HOSPITAL PATIENTS.—A booklet for relatives and friends of patients entering the state mental hospitals has been published by the N. Y. State Department of Mental Hygiene.

Designed to reassure the anxious family, the booklet explains what happens to the patient in the hospital and points out the role of the relative. Necessary rules and regulations and the reasons for them are discussed. The theme of the text is that after a patient is admitted, the hospital and the family must work together toward his recovery.

INTERNATIONAL ASSOCIATION OF APPLIED PSYCHOLOGY.—The International Association will hold its 13th Congress in Rome, April 9-14, 1958. Plenary sessions will deal with psychology in the training of managers, physicians, teachers and judges.

Sections of the Congress will be devoted to problems of industrial psychology and vocational guidance; medical psychology; educational psychology and legal psychology.

For further information, write the Secretary-General, Prof. Luigi Meschieri, 41, Rue Gay-Laussac (5^e), Paris, France.

THE AMERICAN PSYCHOSOMATIC SOCIETY.—The 15th annual meeting of the American Psychosomatic Society will be held in Cincinnati, on Saturday and Sunday, March 29 and 30, 1958.

The Program Committee would like to receive titles and abstracts of papers for consideration for the program, no later than November 15, 1957. The time allotted for presentation of each paper is 20 minutes.

Abstracts in octuplicate should be sent to the Chairman of the Program Committee, Dr. Theodore Lidz, 551 Madison Ave., New York 22, N. Y.

NEW YORK STATE LEGISLATION CONCERNING MENTAL RETARDATION.—The Report of the New York State Joint Legislative Committee on Mental Retardation, 1957, describes legislation introduced at the request of the committee and passed in 1956. The 7 laws thus passed deal with inequities arising from liability for payment of care in mental hospitals; financial aid for Cooperative Boards; obtaining all facts concerning mentally retarded children; permitting private organizations to conduct classes in public schools; deleting the mandated 3-year age limit for classes; continuous study of the

incidence of mental retardation; greater state financial aid to the mentally retarded; the establishment of a single basic program for state aid and the establishment of 2 demonstration centers for the purposes of case finding, diagnosis and parent counseling.

Some of the recommendations of the committee for 1957 concern the obtaining of state aid to employ psychologists; the establishment of a separate division within the Department of Hygiene for an administrative program for the mentally retarded; establishment of a policy of separate facilities for mentally retarded delinquents; appropriate classes to be set up by boards of education for the retarded between the ages of 5 and 21; mandatory transportation; and scholarships for the training of teachers for mentally retarded children.

PROBLEMS OF AGING.—A pioneer Regional Center for Research on Aging is to be established at Duke University, Durham, N. C.

First of its kind in the nation, the center will be supported in part by a U. S. Public Health Service grant expected to total more than \$1,500,000 over a 5-year period. The center will serve as a pilot project in the Southeast and its success may determine whether or not similar undertakings will be launched in other regions with support from the National Institutes of Health in the USPHS.

Specific aims of the center, which is expected to be in operation within the next 18 months, include encouragement and support of research into the phenomenon and health problems of aging; training of research investigators; and development of a source of scientific knowledge in this field for government as well as for private groups.

CONNECTICUT POSTGRADUATE SEMINAR IN PSYCHIATRY AND NEUROLOGY.—The 11th Postgraduate Seminar will extend from September 18, 1957, through April 16, 1958.

From September 23 through December 6, 1957, sessions in clinical neurology, neuro-roentgenology, electroencephalography, neuroanatomy, neurophysiology and neuropathology will be held on Mondays and Wednesdays from 3:00 to 9:00 p.m., at the

Yale University School of Medicine, New Haven, Conn. On November 27 and December 2, 1957, four sessions in clinical psychology will be held from 4:00 to 9:00 p.m., also at the Yale University School of Medicine.

From January 6 through March 3, 1958 (Mondays), from 3:00 to 8:45 p.m., sessions in general psychiatry, psychosomatic medicine, geriatrics, and psychiatry and law will be held at the Connecticut State Hospital in Middletown.

From January 8 through March 5 (Wednesdays), courses in child psychiatry and pediatric neurology will be given at the Yale University School of Medicine from 3:00 to 8:30 p.m.

There is no fee for the above courses.

Copies of the program may be obtained from the Office of the Assistant Dean for Postgraduate Medical Education, Yale University School of Medicine, 333 Cedar Street, New Haven, Conn.

EASTERN PSYCHIATRIC RESEARCH ASSOCIATION PAPERS.—Reports of papers read at the 1st annual meeting of the Eastern Psychiatric Research Association in October 1956 are presented in a monograph supplement to *Diseases of the Nervous System* for July 1957. It is a welcome service on the part of Editor Harris to have made this material available in this way. The supplement gives an introductory account of the origin and organization of the Eastern Psychiatric Research Association and presents photos of its first officers: president, Dr. David J. Impastato; vice-president, Dr. Leo Alexander; secretary-treasurer, Dr. Theodore R. Robie; and councilors, Drs. Joseph Epstein, Emerich Friedland, William L. Holt, Jr., and Harry R. Lang.

Of especial value is a complete report with detailed table by President Impastato of fatalities in EST, based on the studies of 214 fatalities reported in the literature and 40 fatalities previously unpublished.

This supplement includes also reports of papers read at a seminar on EST at Kings Park State Hospital in October 1957.

A roster of members of the Eastern Psy-

chiatric Research Association, numbering 120, is also included.

DR. TYHURST GOES TO THE UNIVERSITY OF BRITISH COLUMBIA.—From the Allen Memorial Institute of Psychiatry, McGill University, comes the announcement that Dr. J. S. Tyhurst, professor of psychiatry at McGill, has been appointed professor and chairman at the department of psychiatry at the University of British Columbia, and head of the department of psychiatry at Vancouver General Hospital.

DR. SLOANE TO HEAD PSYCHIATRY AT QUEENS UNIVERSITY.—Dr. R. B. Sloane, lecturer at McGill University and assistant psychiatrist Royal Victoria Hospital, Montreal, has been appointed professor and chairman of the department of psychiatry at Queens University, Kingston, Ontario.

SALMON LECTURES 1957.—The Salmon Committee on Psychiatry and Mental Hygiene announces that this year's Thomas William Salmon Lectures will be given by Dr. David McK. Rioch, Director of the Division of Neuropsychiatry at the Walter Reed Army Institute of Research in Washington, D. C.

Dr. Rioch will speak on "Research in Psychiatry: Certain Problems and Developments in Multi-Disciplinary Studies," and the talks will be given at 4:30 and 8:30 p.m. on Thursday, November 21, 1957 at Hosack Hall of the New York Academy of Medicine.

EASTERN PSYCHIATRIC RESEARCH ASSOCIATION OFFICERS, 1957.—At its annual meeting in June 1957, the Association elected the following officers for the forthcoming year: president: Dr. Leo Alexander; president-elect: Dr. Theodore H. Robie; 1st vice-president: Dr. William L. Holt, Jr.; 2nd vice-president: Dr. Charles Buckman; secretary-treasurer: Dr. David J. Impastato; asst. secretary-treasurer: Dr. Lawrence H. Gahagan; councilors (for 2 years): Dr. William Furst and Dr. Pasquale Lotesta; councilors (for 3 years): Dr. Nicholas Locascio and Dr. Evelyn Ivey.

BOOK REVIEWS

DIE BEURTEILUNG DER ZURECHNUNGSFÄHIGKEIT.
Ein Vortrag. (Dritte Auflage.) By *Kurt Schneider*. (Stuttgart: Georg Thieme Verlag, 1956.)

In the first part of this concise and lucid booklet, Schneider presents a short outline of his psychiatric nosological system developed largely on the basis of Karl Jaspers' psychopathology. Abnormal behaviour is either a sign of disease or an expression of abnormal mental variation. The concept "disease" is understood in a purely medical sense. It comprises the known diseases like general paresis or senile brain disease as well as postulated diseases where the clinical picture indicates the presence of a disease process although the latter is still not proved as in schizophrenia and manic-depressive psychosis. "Abnormal variations" are essentially different from diseases in that they are purely quantitative deviations from the average. No sharp borderline exists between normality and abnormal variations. In the intellectual field only the negative variations are of psychiatric importance. Clinically, they appear as congenital mental deficiencies of moderate degree whereas the severer forms are usually a sign of "disease." Other abnormal variations are abnormal vital drives, abnormal (psychopathic) personalities and abnormal reactions which comprise also the neurotic reactions.

This nosological system forms the basis for the application of Article 51 of the German Criminal Code in psychiatric cases. This article states that a punishable act has not taken place if the perpetrator at the time of the crime did not have insight into the nature of the crime or the ability to act according to this insight; either because of clouded consciousness, morbid impairment of his reasoning, or mental deficiency. If insight or the ability to act according to it was only diminished the penalty may be diminished as with an attempted crime.

According to Schneider the benefit of Article 51 should be applied in all cases of psychiatric disease, known or postulated, and in those cases of Group 2 of his classification which lead to impairment of consciousness or in cases of mental deficiency. It will usually suffice to make the clinical diagnosis because the presence of one or the other disease entity automatically implies one of the three conditions mentioned in Article 51.

The most interesting part of Schneider's booklet, however, is his discussion of the problem whether and how far the psychiatric expert is able to express an opinion regarding the accused's insight into the criminal nature of the act and his ability to act accordingly. Consequently, Schneider holds that these questions are unanswerable and remain so in a court of law. The reason is that Article 51 is based on an outdated psychology which divides any action into a rational part during which

the acting subject deliberates on the intended act, and into a phase of decision, when he decides which course to follow. As, however, our actions result from the interplay of drives, some of them unconscious, voluntary decisions between possible courses of actions are extremely rare. Moreover, it seems impossible to determine whether in a given situation of temptation ethical insight actually appeared. The time factor is also of importance, as in criminal deeds of a more complicated nature more time may elapse and more opportunity to achieve insight. As far as the ability to act according to insight is concerned, the situation for the expert is still more difficult. Even the assumption of a "free will" as the basis of any criminal code does not help because it is impossible to state whether an individual at a given moment could make use of it. In short what the expert does is to conclude on clinical diagnostic grounds whether Article 51 is applicable or not.

Although Schneider's booklet deals only with the German Criminal Code its content makes worthwhile reading for everybody interested in forensic psychiatry.

V. A. KRAL, M.D.,
Allan Memorial Institute,
Montreal, Que.

ASPECTS DE LA PSYCHIATRIE MODERNE. By *Jean Delay*. (Paris: Presses Universitaires de France, 1953.)

The first part consists of the traditional inaugural address delivered by the author in 1947 when he was appointed Chief of the Clinic of Mental Diseases of the Faculty of Medicine. It begins with an expression of homage to his predecessor and teacher Levy-Valensi, whom the Nazis killed in a gas chamber. He pays tribute to his various teachers and guides, whose names represent a veritable Who's Who in French medicine—Pierre Janet, Pichon, Laignel-Lavastine, George Dumas and others.

He narrates the development of the physical sciences in service of psychiatry such as pneumo- and electro-encephalography, chronaximetrics, etc. The chronaximetrics is a French discovery and was developed by Lapique and Bourguignon. Psychochemistry studied the correlation of mental activity with hormones vitamins. The greatest progress the biological methods made in psychiatry are represented by shock therapy. This method does not react on the cause of mental disorder but on its mechanism. It appears to the author that the action of electroshock, being both physiologic and psychologic, proves that its effect is not only on the encephalon as was once thought but on the functional correlations between the diencephalon and the frontal lobe and more generally between the basis and the cortex of the brain.

The introduction of intelligence and character tests like those of Binet-Stanford or Wechsler-Bellevue, the Minnesota or the Rorschach enable us to make a psychological analysis with the greatest objectivity.

The research in the origin of mental disease cannot limit itself to physical causes but has to consider also moral causes. It was Charcot who was the first to call the attention of the medical profession to the role played by the subconscious in the neuroses and particularly in hysteria, Charcot and not Freud. Freud recognized the great debt he owed to the teachings of the Salpêtrière. He arrived in Paris when 29 years old and had specialized in pure neurology under Meynert without revealing any trace of his future orientation. But he was soon influenced by the Tuesday lectures of Charcot and his demonstrations of hysterics and hypnotic treatments. He even overheard Charcot telling Brouardel: "At the source of such an illness there is always a sexual element." When Freud returned to Vienna and to Breuer, he discovered, while treating a hysterical person, a new approach, quite different from hypnotism: the psychoanalytic.

Delay discusses the two tendencies that characterize the evolution of psychiatry: one looks for physical causes of mental disease and utilizes physiotherapy, the other looks for moral causes and utilizes psychotherapy. If the emotional conditions repeat themselves, an acute disorder becomes chronic. For example: paroxysmal arterial hypertension becomes chronic hypertension, occasional acid hypersecretion from the mucosa of the stomach becomes an ulcer. Functional troubles do not appear any more as a result of a discreet anatomical lesion but as its cause. He describes a visit to New York Hospital where he saw in the clinic of Harold Wolf a patient with a gastric fistula who was subject to crises of paroxysmal anxiety. Harold Wolf who studied according to Cannon the gastric reactions to emotion, observed that when the patient's condition was that of paroxysmal anxiety, the motility and the secretion of gastric acid increased and the small hemorrhages from the mucosa eroded into an ulcer. He demonstrated that an emotion may cause ulceration.

In his opening address at the First World Congress in Psychiatry (Sept. 19, 1950), Delay described the admirable study and classification of mental diseases by the psychiatrists of the 19th century as a class by itself. The introduction of biologic techniques in psychiatry belongs to the last half-century. The first use of lumbar puncture was in the infectious diseases of the brain and meninges. Later it developed into ventricular intervention and the relationships between mental and hydrolic equilibrium. Hypertension or hypotension of the brain were treated by decompression or insufflation. Dandy has shown that the injection, through the lumbar or ventricular regions, of gas or fluids, transparent or opaque to XRay, permits us to learn about certain conditions of the brain.

The biophysicists saw in all the functions of the brain, electrical influences. The "animal spirits" that, according to Descartes, issued from the pineal

gland, were nothing else than the propagation of electrical waves. Adrian, Lapicque and MacCulloch made further contributions to the interpretations.

The author comments further on the various therapeutic methods of Sakel, Meduna, Cerletti, Fiamberti and Lopez Ibor. He discusses the complexity of the psychic and physical reactions that accompany shock. In the observations of Aschner, Camus, Roussy, Claude and Lhermitte.

"Neurosis and Creation" is the title of a Presidential address which Delay delivered in Liège July 25, 1954 at the 52nd Congress of Neurologists & Psychiatrists. He discusses the theories of Lombroso and Nordau that caused hot polemics by the end of the century on the topic of degeneration. André Gide in his essay on Dostoyevsky expressed the idea that the cause of every great moral reform, of all changes of values, is a physiological mystery. He discusses in a new light the mental deviations of authors in modern times.

HIRSCH LOEB GORDON, M. D.,
New York City.

THE CIRCLE OF GUILT. By Fredric Wertham, M. D.
(New York: Rinehart & Co., Inc.; Toronto:
Clarke, Irwin & Co., Ltd., 1957. \$3.00.)

In 1954 Kenneth Chapin, aged 20, killed a 19-year-old baby-sitter and the little boy aged 4 she was guarding. The weapon was a bayonet. The youth had stabbed the girl 38 times and the child 23 times. This was in Massachusetts. No motive for the crime was established. The killer was first sentenced to death, but the sentence was later commuted to life imprisonment.

The Chapin case represents a special type of juvenile crime. The one discussed in this book is of another type—a teen-age gang homicide in New York City. A Puerto Rican youth, Frank Santana, aged 17, accompanied by two other members of his gang, all Puerto Ricans, encounters a youth belonging to a hostile gang. Some blustering words and behavior follow. Frank takes a gun from his companion and, whether by design or accident, the gun is discharged and the unfriendly boy is killed.

In court several months later Santana pleaded guilty to second degree murder and there was no trial. For this crime the sentence required by law is 20 years to life. The judge gave him 25 years.

Dr. Wertham had been retained by the defence, with no fee, since the family of the accused was on relief. The purpose of his investigation was to establish all the factors, social, economic, cultural, educational, that might reasonably be assumed to have bearing on the crime, to show what kind of personality Santana had developed, what was the customary content of his mind, what had come to be his standards of conduct, and therefore to indicate if possible whether *mens rea* could be said to have existed at the time of the shooting. All this would have been useful information for the jury in the event that the case had come to trial. There were background conditions, Santana's almost daily sessions at crime movies, his daily diet of horror comics—"creeps" was the common term

for these books. Santana had collected as many as two or three hundred of these creeps. No other literature interested him. Wertham calculated that in the 4 years that Santana had been in continental United States "in the comic books that he had read and in the movies that he had attended, he had seen at least 22,000 homicides." He quotes George H. Pampfrey who said, "One thing is certain: children fed on a regular diet of horrors and brutal crimes will gradually lose their sense of what is right and wrong."

An especially important chapter in this book is one dealing with the Island of Puerto Rico where Santana was born, its history and development and the living conditions there before and after the Spanish-American War when the Island was annexed to the United States (1898). Conditions existing in Puerto Rico during the twentieth century, as described by John Gunther and others, are not flattering to the United States. These conditions throw light on the considerable migration of Puerto Ricans to the mainland, as they have a right to do being citizens of the U.S.A., but where they are met with unfavorable prejudice and discrimination and a common view that they represent a substandard group. These circumstances do not promote integration but help to explain why the ratio of delinquency and crime among Puerto Rican minors on the mainland is so much higher than in their island home.

Because there was no trial Wertham did not have the opportunity to present before a jury the data he had collected and the conclusions he had drawn therefrom, and so he decided "to write them for a larger jury" in this revealing volume.

C.B.F.

HEARING THERAPY FOR CHILDREN. By *Alice Streng and others.* (New York: Grune & Stratton, 1955. \$6.75.)

In the preface the authors claim that they have produced the first book to contain in one volume the special skills and knowledge needed by members of certain professional groups who work with hearing handicapped children. The groups mentioned are the physician and five groups of lay people.

The hopeful reader notes with approbation the titles and sequence of the chapters and at the end of each of the latter a list of papers by many distinguished writers and workers.

The field covered by the book is so broad that no one reader could claim such mastery as to be able to justly criticise every detail. The writer of this review has devoted many years to children with impaired hearing and deaf children and knows many of the authors whose works are referred to and believes that the book fails to achieve its aims.

This book is ostensibly written regarding the needs of children—and children require very careful consideration. Only older children who are thoroughly healthy, well disciplined, and of above average intelligence can be subjected to the tests

and the treatments suitable for adults. Even such children require unusual gentleness and patience and these qualities must be joined with unusual skill. A child is very able to detect lack of these qualities in its otologist and when it does, the examining, the testing and the decisions made are apt to be very wrong. The younger the child the greater the difficulties.

Every page of a book with this title should be permeated with this point of view. A number of fundamental misconceptions greatly impair the value of its message.

It is true that the antibiotics, when properly used, diminish the severity of upper respiratory infections so that mastoid surgery is much less frequently required and incision of eardrums is fortunately uncommon. Earache should be treated promptly and often is—but it is still very common and earache often means otitis media, and every otitis media carries with it the threat of impaired hearing. The lesson for the lay groups should be insistence on adequate and persistent treatment of every case of earache by the physician. Prevention should be the keynote.

It is implied that a pure-tone audiogram has the same meaning from coast to coast and that the meaning is very valuable. But it has been demonstrated unquestionably that audiograms on the same patient obtained under different environmental conditions, and by different examiners can be amazingly dissimilar. An audiogram is nothing more than a record of how a patient responded on a certain date to a certain technique under certain conditions. When repeated at a later date comparison of the two records has no value unless the technique and conditions were exactly the same as those of the first test. No diagnosis can be made from an audiogram alone. And finally—pure-tone audiograms on little children can be extraordinarily full of errors.

Great stress is laid on "interpreting the audiogram." Some technicians can be taught to administer some of the tests but from what has just been said such technicians should *never* interpret them. And yet this book tells them how to do so.

The bibliographies in some instances contain references which to judge from the text of the preceding chapter have not been read or if they have been read have been misunderstood.

The index is far too short and it is irritatingly inaccurate.

To give a complete account of the failings of this volume would take a great deal of space. It is doubtful whether any chapter except the one, "Hearing Losses and their Medical Treatment," will satisfy any reader of moderate ability in an acquaintance with otology. It contains a vast amount of information and details of many skills which the lay groups for which it is written do not require and cannot understand.

D. E. S. WISHART, M.D.,
Toronto, Canada.

A DOCTOR'S BOOK OF THE HOURS. By *Merrill Moore*. (Springfield, Ill.: Charles C. Thomas Co., 1955, pp. 397. \$6.00.)

Merrill Moore speaks of having written in the neighborhood of one hundred thousand sonnets. The question still remains: a *tour de force* or a dissipated talent? His recent volume, *A Doctor's Book of Hours*, presumably the output of one year, runs to 397 pages, the equivalent in quantity to the collected works of many major poets. It does not lend itself to classification and refuses to fit neatly into this category or that. Call it poetry and immediately it springs a leak and drains away into journalism; but the dilemma remains, for every now and then a live poem jumps from the page and, presto, the good reporter becomes a good poet.

The months of the year give titles to the 12 sections of the book; sub-headings include Analysis of Men, Natural History, The Clinic, Public Life etc., and it might seem that every angle of the world we live in, of the inner and outer man, had been explored by this prolific sonneteer. One expects Moore, as psychiatrist and poet, to be a kind of double deity (poets have ever considered themselves divine, and the psychiatrist must perforce play the role of god), yet even in the discerning sketches of people the poems seldom transcend the analyst's couch.

Though *A Doctor's Book of Hours* demands a patient search before it reveals the talent that is, nonetheless, scattered through its pages, the reader whose interest does not lie in consistent poetic merit will find a variety of lively observation and good reporting on a multitude of subjects. Merrill Moore himself describes the poetic process; he would do well to take his own words to heart, and to buy a new and stronger lock for the djinn. Here are his lines:

THE POET OWNS A DJINN, SHUT IN A BOTTLE HE
RUBS OCCASSIONALLY; THE BOTTLE IS HIS MIND

The impulse to write a sonnet is an impulse
To record something that is momentarily
Felt with volatile intensity
Or something that may, over a longer time,
Be felt more deeply, although less intensely
But with a kind of continuity
And earnestness approaching the sublime.

More than that, (this is only the beginning)
Sonnets are virtuous, the opposite
Of sinning; for example when we look
With comprehending eye on Shakespeare's book,
We find a record of great passion there,
Most of which, I suspect, was thinnest air,
Not flesh and blood, because, if it had been
An active passion, in reality,
The poems would *not* be written, and the djinn
Would have escaped the bottle;

as it is,

His strength lies in this fact: he is confined,
His power is locked in the poetic mind.

ANNE WILKINSON,
Toronto, Canada.

AMERICAN LITERATURE AND THE DREAM. By *Frederic I. Carpenter*. (New York: Philosophical Library, Inc., 1955, pp. 220. \$4.75.)

"The American Dream" began long before the Revolutionary War. It started in Western Europe and the British Isles. It was very simple in its origin and it meant only one thing—a fuller, richer, and better life for all. It was not a revolutionary concept and had nothing whatsoever to do with any later "socialist" or even later "communist" ideas. It did share something of the qualities of Sir Thomas More's "Utopia" and possibly it got something from Plato's "ideal" for a republic.

In this book the author makes remarkable selections from American literature beginning with Emerson and Bronson Alcott and brings the idea up to date including stops at many way-stations. Walt Whitman would be amazed if he were living to see his casual thoughts so sharply emphasized. Melville, now so popular as the portrayer of Moby Dick, is allowed to contribute a small donation.

In Part 4 of this book more recent thinkers are grouped under the heading of "pragmatists" and even Eugene O'Neill is given some credit. The author has objectively harvested a very wide field, but he has sifted his material down to "big" names and the way they deal with "big" ideas for good and for evil. He treats Robinson Jeffers in an interesting way, also Thomas Wolfe, John Steinbeck, William Saroyan and Ernest Hemingway. I wish he had also analyzed John Crowe Ransom and Robert Penn Warren, who have much to say about the general topics of this book. It is very provocative writing but not always conclusive. The general method of the author is eclectic and this book will appeal to the general reader who has begun to think about that most basic of all ideas, what is good and what is not good, as it applies to the major literary figures who have written since the American states became united.

MERRILL MOORE, M.D.,
Boston, Mass.

THE DIRECTION OF HUMAN DEVELOPMENT: BIOLOGICAL AND SOCIAL BASES. By *M. F. Ashley Montagu* (New York: Harper & Brothers, 1955, \$5.00.)

We are in the midst of a surge of interest in the meaning of personality development, as it has become increasingly obvious that this topic has a unifying and profound influence on all the aspects of the behavioral sciences. Professor Ashley Montagu joins this movement by presenting his synthesis of the process of human socialization.

This volume had its inception in the sociology classrooms of Harvard University in 1945, and was nurtured to birth through teaching at other universities. (A preliminary precipitate, entitled *On Being Human*, was published in 1950 by Henry Schuman.) Dr. Montagu has brought together the research consequences of hundreds of studies, all properly notated, and has presented them and his conclusions in a highly readable manner. As he

wanted to reach as wide an audience as possible, he points out that he has omitted many pertinent references.

He begins his presentation with a discussion of the biological basis of co-operation. Much evidence is marshalled to illustrate that even very simple biologic life is interdependent, and that co-operation is a more fundamental rule than the blood-tinged struggle in nature suggested by Darwin. A chapter summarizing the structure and function of the nervous system is followed by one which points out that the expression of heredity is a function of the organic potentialities and the environment. Prenatal development, and influences thereon, are discussed along with the meaning and significance of birth and its trauma. Motivations are divided into basic needs which are closely related to the organic processes of the body, and acquired needs. It is shown that even the vital basic needs become affected by cultural demands, which in turn most significantly determine the vast number and varied acquired needs. The last half of this volume is devoted to variations on the themes of dependency, interdependency and love. The author proclaims the essential goodness of Man, the fallacy of individuality, the importance of early experience, particularly as characterized by love, and the devastating results of a deprivation of love. In his last chapter, he attempts to define the various functions of love. He concludes with a fervent plea that the primary goal of education be the skills of human relations. An appendix makes possible a discussion of learning theory and how it may further our understanding of human development.

This is a good book and a sound one. It represents the best of the current trend to broaden the realization of the importance of interpersonal and cultural influences on personality function and development. With its emphasis on co-operation and love, it may seem to many people that it overlooks the potential aggressivity and destructiveness of Man, whether inborn or learned. It should have a wide audience. The intelligent layman will find it stimulating and instructive, as will the students

of the various social sciences. For the student of medicine, it will be more useful as a reference work than as a suitable text on personality development, because it deals more with the socializing forces than what happens to the person throughout life.

ERIC T. CARLSON, M. D.,
New York Hospital—Cornell
University Medical College.

SOCIAL PROBLEM OF MENTAL DEFICIENCY. By N. O'Connor and J. Tizard. (London & New York: Pergamon Press, 1956. \$5.00.)

This book is an excellent addition to the literature dealing with the problems of the mentally retarded, and particularly, with the problem of the employability of this group. The volume deals with the general care and treatment of the mentally retarded, particularly, in a British scene.

The authors present a detailed psychological study of the high grade defective as a social problem. There is an excellent review of the literature of psychological research and the authors also offer results of their own research in the direction of types and occupations which the feeble minded can be trained to do, and the predictability of success. The outlook on the whole is an optimistic one with emphasis being laid on the necessity of psychological and workshop investigation when arranging for a program of employment placement.

The first three chapters deal with the historical background of the problem of mental deficiency and detail the services for this group in Britain. The ensuing chapters cover studies of training and occupation placement of high grade defectives and investigations into the prediction of occupational success.

On the whole this small volume will be welcomed by professional workers in the field of mental deficiency and will prove a worthwhile guide to those concerned with the rehabilitation of the feeble minded.

H. F. FRANK, M. D.,
Ontario Hospital Training School,
Smith Falls, Canada.

SCIENCE

Science is nothing but trained and organized common sense, differing from the latter only as a veteran may differ from a raw recruit: and its methods differ from those of common sense only as far as the guardsman's cut and thrust differ from the manner in which a savage wields his club.

—THOMAS HENRY HUXLEY

AN ENGLISH VIEW OF AMERICAN PSYCHIATRY

MICHAEL SHEPHERD, D. M.^{1, 2}

"It has been difficult," said Dr. Whitehorn in his 1951 Presidential Address to The American Psychiatric Association, "for many European psychiatrists to understand the American situation(25)." He could not have meant to imply that they lack interest in the subject. On the contrary, during the present century the growth and influence of American psychiatry have so increased that to psychiatrists elsewhere a visit to North America has come to constitute an almost indispensable part of their post-graduate education. For financial rather than medical reasons it is unfortunately an experience which has been enjoyed by only a small minority, and without this opportunity the opinions of the European psychiatrist must depend on the conflicting reports of his more fortunate colleagues and on the torrent of American publications. Accustomed to a more centralised tradition of medical training and research, usually with the university clinic in the foreground, he is hard put to it to understand the many, diverse and possibly unfamiliar institutional forces—State supported institutes as well as university centres, federal agencies like the United States Public Health Services, voluntary organisations like the National Association for Mental Health, private hospitals and clinics and the great foundations—which influence the form and direction of American psychiatry to-day. Perhaps it is inevitable that many European psychiatrists, seeking for some uniformity amid seeming chaos, have tended to heed only the most clamant of many voices and have assumed, again in Dr. Whitehorn's words, that "... the psychoanalytic movement has captured American psychiatry."

Among the European schools of psychiatry that of Great Britain has a close traditional link with North America. Between the wars many of the most eminent British psychiatrists made their pilgrimage to the Henry Phipps Clinic, and Adolf Meyer handsomely

acknowledged the contribution of British to American psychiatry in the 14th Maudsley Lecture(20). Describing his impressions of North American psychiatry more than 25 years ago one British professor concluded that "... the future is more secure in America than in any other country(19)." More recently, however, there has been evidence of what another British professor has termed "differences . . . of quantity and tempo" between the psychiatric developments in the two countries(17). Some of these differences have found clear and even sharp expression in publications from both sides of the Atlantic. Dr. Freyhan, however, in his recent sympathetic review of European psychiatry concludes that American psychiatrists are as likely as their European colleagues to be struck by the unfamiliarity of what they find on leaving home(12). Indeed, he goes so far as to stress Professor Bleuler's warning that a breakdown may occur in communication between psychiatrists on the two continents. Such a situation is unknown in other branches of medicine, and it cannot but be deplored. Dr. Freyhan's article also makes it evident that the best in European psychiatry is of interest to American physicians not only by virtue of its intrinsic quality but also because of the light it may reflect on domestic problems. Ample confirmation of his opinion was provided during the year which the author was privileged to spend as a Post-graduate Travelling Fellow in the United States,³ when many of these problems were frequently raised in discussion with American colleagues. The discussions proved invaluable for the purpose of clarifying many obscure aspects of American psychiatry; they also helped make possible the formulation of some general views about it. Incomplete as such views must be, they have been summarised here in the hope that one observer may have been able to see something of interest to the participants.

Many of the misunderstandings which

¹ The Maudsley Hospital, Denmark Hill, London, S. E. 5, England.

² Corresponding Fellow of the A.P.A.

³ Travelling Fellow of the British Postgraduate Medical Federation in the U.S.A., 1955-1956.

have arisen in other countries about American psychiatry spring from a failure to understand the social setting in which the subject is practised (15). It is widely recognised that the content as well as the form of psychiatric practice is moulded by environmental factors. This complex issue can be illustrated by reference to the distribution of psychiatrists working respectively in the public service and in private practice. In England psychiatry, as a branch of medicine, comes within the orbit of the National Health Service; the bulk of the working time of British psychiatric consultants is devoted to salaried service in hospitals or other public institutions and private practice must consequently assume less importance in the majority of cases (1, 21). The efforts of the British Ministry of Health to improve the quality of mental hospitals and to develop them as dynamic centres of community service have been dependent on a supply of well-trained and often highly qualified physicians; to them are due the more liberal use of voluntary legal status, the development of domiciliary consultations, and of out-patient clinics, the experiments with the "open door" and the "therapeutic community," and the emphasis on rehabilitation (7, 16, 18).

Medical care in the United States is organised very differently. Nearly 3,000 of the 7,500 recognised psychiatrists in 1951-52 listed private practice as their major activity (5). By 1954 Davidson has shown that the private practitioners for the first time outnumbered their colleagues in salaried positions; further, one-quarter of them were engaged exclusively in the practice of psychotherapy and were not considered to "... meet the traditional criteria of the practice of medicine (8)." (These figures, of course, take no account of the large number of non-medical psychotherapists practising in the United States, but they have very few counterparts in Great Britain.) It is thus apparent that proportionately fewer American psychiatrists are in salaried public service and their role and functions are correspondingly modified.

A trend of this nature has other implications. Since no form of medical education can be dissociated from the purpose to which it is being put, the organisation of psychi-

atric practice patently exercises a profound influence on psychiatric training. At the present time it is difficult to avoid the impression that to a substantial number of young American psychiatrists several of the major professional incentives—public status, mode of living and financial reward—are associated far more with private practice than with hospital work. From years of experience with a residency training programme in Massachusetts, Barton and Yakovlev reported the "... reluctance of residents to accept even financially attractive appointments in the geographically isolated state hospitals and even in many of the training-wise self-contained institutions (4)." The specialist therefore understandably demands that much of the curriculum should be devoted to psychotherapy and psychodynamic theory. His relationship with his supervisor often constitutes the corner-stone of his instruction (23). Conversely, there is a distaste for the tracts of detailed knowledge dismissed as "descriptive psychiatry"; an antagonism to many of the facts and concepts associated with the study of heredity; a neglect of much biological investigation; and, as Kanner has so strikingly shown, in many centres a biased ignorance of the evolution and the historical roots of modern psychiatry (14).

To an English observer the problems and experiments in psychiatric education in America seem to be of cardinal importance. On the one hand he is impressed by the generous allowance of time afforded to psychiatric instruction in the undergraduate years and by the high status of the subject in many medical schools, even if he takes Professor von Baeyer's estimate of American psychiatry as "... Königin unter den übrigen ärztlichen Disziplinen (24)," to be the comprehensible hyperbole of an admirer. Yet American views on the nature and purpose of psychiatric education are still conflicting and are sometimes uncompromisingly critical (6). The visitor is not entitled to pass judgment but he may legitimately ask whether the frame of reference which is most widely endorsed in many centres of training is broad enough to encourage the inter-disciplinary co-operation which is clearly needed for psychiatric progress. The dangers of a re-

stricted viewpoint have been illustrated in the past 3 years: the frosty reception given to the newly introduced "tranquillizing" drugs by psychiatrists with a bias against physical forms of treatment has been matched by the enthusiastic use made of the drugs by psychiatrists of a different persuasion(2). In many scientific fields work bearing on psychiatric problems has bombarded the clinical psychiatrist with data, theories and speculations, mined from the rich seams of the social and laboratory sciences, psychology, statistics and public health, to name only the more important. The contribution of the investigators in these fields constitutes the most hopeful and the most challenging feature on the American psychiatric scene: it demands continual assessment by clinical psychiatrists who are in danger of becoming passive, if receptive, junior partners in what should be a joint enterprise of collaboration. More is now demanded of the psychiatrist than a medical background, an administrative proficiency and a close acquaintance with one concept of individual psychopathology. "Research has become big business" according to the head of the Biological Sciences Division of the Office of Naval Research(22), and as very large sums of money become available, psychiatrists are being led or induced to assume a different role from that to which most of them have been accustomed.

Fortunately, there is no reason to believe that any single viewpoint can long dominate North American psychiatry. The 1956 centenary celebrations of Freud's birth demonstrated the high standing of psychoanalysis in the country but did not conceal the restless dissatisfaction which exists not only among the small number of avowed antagonists of the psychoanalytic movement(3) but also among its proponents. In Great Britain psychoanalysis has been in contact with, rather than a part of, academic psychiatry: its concepts have been transmitted through a semi-permeable membrane of critical examination and testing, and the rate of absorption has been slow. In the U.S.A. a remarkable attempt has been made in many centres to ingest the whole system, python-like, into the body of academic opinion. The post-prandial reaction seems now to be leading towards the elimination of indigestible matter and waste

products: in evidence are the pronouncements of leading psychiatrists like Whitehorn and Appel; the new stress being laid on the psychotherapeutic method as a research tool; the supplementary investigations of the psychotherapeutic process itself; and the experimental testing of many psychodynamic hypotheses, though for much of this work the credit must go to psychology rather than to psychiatry(13). It seems highly probable that what is of lasting value in psychodynamic theory and practice will find its way into both British and American psychiatry; the difference lies in the tempo, and in the route which is being taken.

There is, however, only a partial view of American psychiatry to be obtained from contact with the medical and allied professions. Since the early days of the mental hygiene movement psychiatry has entered into the fabric of American life in a way unparalleled elsewhere and which finds expression to-day in the widespread quest for "mental health." No one interested in mental illness can disregard "mental health" which, although it eludes all attempts at definition, remains a live and vigorous concept. To the visitor it seems that "mental health" would become a less nebulous objective if three separate uses of the phrase were always distinguished. "Mental health" is employed first as a euphemism for mental illness, and may as easily screen an inquiry into schizophrenia as into schools. Secondly, and more legitimately, it designates the campaign for the viewpoint of those workers who apply skills developed in the field of public health to psychiatric problems; workers for "mental health" in this sense concentrate on the group rather than the individual as the unit of study, conducting morbidity and other surveys and paying close attention to the principles of epidemiology and statistics. But in its third guise "mental health" can be understood only by identifying what one authoritative subcommittee has termed "... the flavour of morals and ethics, religious fervour, personal investment, unvalidated psychological concepts, value judgments, psychiatric theory, political science, welfare movements, and cultism(11)." It is more likely to be the task of the social historian than of the psychiatrist to analyse the full

range of "mental health" activities in America today. Meanwhile the sociologists have begun to clear the way (9, 10, 26). Psychiatrists should follow their progress closely if they wish to grasp the social implications of their own activities.

The signs augur a phase of self-examination and reassessment in American psychiatry. It is to be hoped that the forthcoming report of the Joint Commission on Mental Illness and Mental Health will indicate the direction which is to be taken. Whatever that may be, it is certain to influence those of us who work in other countries and who will hope to profit from the achievements and even the mistakes which will ensue. Meanwhile the achievements of British psychiatry in recent years testify to the progress which has been made and illustrate the shaping of many advances by social factors. No psychiatrist concerned with the welfare of his subject in either country can surely doubt that a closer professional and personal interchange will result in mutual benefit.

BIBLIOGRAPHY

1. Abel-Smith, B., and Titmuss, R. M.: *The Cost of the National Health Service in England and Wales*. Cambridge University Press, p. 119, 1956.
2. Aldrich, K.: *Psychiatric Research Reports*, No. 4. Washington: Am. Psychiat. Assoc., 1956.
3. Bailey, P.: *Am. J. Psychiat.*, 113: 387, Nov. 1956.
4. Barton, W. E., and Yakolev, P. I.: *Am. J. Psychiat.*, 113: 66, July 1956.

5. Blain, D.: *Am. J. Psychiat.*, 109: 783, Apr. 1953.
6. Boshes, B.: *J.A.M.A.*, 161: 1213, July 1956.
7. Clark, D. H.: *Lancet*, 2: 1005, 1956.
8. Davidson, H. A.: *Am. J. Psychiat.*, 113: 41, July 1956.
9. Davis, K.: *Psychiatry*, 1: 55, 1938.
10. Eaton, J. W.: *Am. J. Psychiat.*, 108: 81, Aug. 1951.
11. *Evaluation in Mental Health*. Washington: U. S. Dept. of Health, Education and Welfare, 1955.
12. Freyhan, F. A.: *Am. J. Psychiat.*, 112: 673, Mar. 1956.
13. Harris, R. E.: *Clinical Methods: Psychotherapy*. In: *Annual Review of Psychology*, 1956.
14. Kanner, L.: *Bull. Hist. Med.*, 29: 329, July-Aug. 1955.
15. Knoepfel, H. K., and Redlich, F. C.: *Psyche*, 7: 67, 1952-1953.
16. Koltes, J. A.: *Am. J. Psychiat.*, 113: 250, Sept. 1956.
17. Lewis, A.: *Am. J. Psychiat.*, 110: 401, Dec. 1953.
18. Lewis, A.: *Rehabilitation Programmes in England*. In: *The Elements of a Community Mental Health Programme*. Milbank Memorial Fund, p. 196, 1956.
19. Mapother, E.: *Proc. Roy Soc. Med.*, 23: 1197, 1930.
20. Meyer, A.: *J. Ment. Sci.*, 79: 435, 1933.
21. *National Health Service: Hospital and Specialist Services Statistics*. H.M.S.O., 1951.
22. Reid, R. D.: *Am. Scientist*, 41: 286, 1953.
23. Reiser, M. F., and Rosenbaum, M.: *Am. J. Psychiat.*, 110: 835, May 1954.
24. v. Baeyer, W.: *Nervenarzt.*, 21: 2, 1950.
25. Whitehorn, J. C.: *Am. J. Psychiat.*, 108: 1, July 1951.
26. Wootton, B.: *The Twentieth Century*, 159: 433, 1956.

CORRECTION AND RETRIBUTION IN THE CRIMINAL LAW

LAWRENCE FRIEDMAN, M.D.¹

It is impossible not to sympathize with Dr. Richard Board's effort to establish a criterion of criminal responsibility devoid of moral judgement (*Am. J. Psychiat.*, 713: 332, Oct. 1956). The approval which the article will doubtless compel from enlightened readers witnesses the shift of concern from judgement to correction that so regularly follows increased understanding. Different human interests make different uses of old institutions, and criminal jurisprudence is showing an undeniable tendency to regard itself as a doctor of society. In this role it will be assisted by Dr. Board's clarification of therapeutic rationale. However, psychiatrists have found by painful experience that advice is effective only to the degree that the advisor both understands the problem presented to him, and the perplexity from which it arises. It would seem that Dr. Board, in reflecting the new interest in correction, has permitted a certain relaxation of these requirements, and has overlooked considerations appropriate to his role both as psychiatrist and operational philosopher.

I

As a philosopher Dr. Board proposes that moral responsibility be discarded as a concern of the law because "moral responsibility [is] an idea having a metaphysical content dealing with free choice between the values of good and evil," whereas "the law constitutes an operation exclusively confined to the natural world of cause and effect." Though briefly stated and undefended, the first assertion is as controversial and unsettled as an assertion may be. It is familiar as the argument used by a group of critics to impeach the ethics of modern psychiatry. Psychiatrists, as good citizens, are wont to protest that the causal link between a person's actions and his total personality, far from excusing his behavior, is the prime requisite for attaching moral responsibility, which could not sensibly be attached to a freakish, spontaneous act totally unrelated to the personal-

ity (3). It is this fact to which Freud refers when he says "Obviously one must hold oneself responsible for the evil impulses in one's dreams. In what other way can one deal with them? Unless the content of the dream . . . is inspired by alien spirits, it is part of my own being" (1).

But if it is an error to regard moral responsibility as opposed to cause and effect, it is no less so to regard the law as "an operation exclusively confined to the natural world of cause and effect." For the law is not principally concerned with establishing what is and has been, nor in predicting what will be, but rather with the use of these in deciding what *should* be. Following the example of the law, Dr. Board himself steps outside the natural world of cause and effect and there finds that what is "worthy" of society is correction rather than condemnation and punishment.

This is a suggestion for which we should thank him if he recognized it as a suggestion. As the "operational meaning or 'cash value' of the concept (of criminal responsibility)" we are more likely to find ourselves somewhat suspiciously counting our change. For example, Dr. Board's operational analysis of criminal procedure reveals to him the workings of protective, corrective and humane principles, and something else which he calls "vengeance to the criminal." Although this last is apparently to be found in the operation of the law, it is not therefore, as you might expect, a part of its operational meaning. It is a "contaminant." This strange qualification of an operational concept (in which the metaphysician will recognize the old "accidental attribute") is required because the investigator finds such aims "rejected as unworthy of society,"—rejected, evidently by Dr. Board, since they are retained as contaminants by society. Such an operational analysis, which includes the import of some operations and excludes the significance of others, resembles not so much operational philosophy as it does operative surgery. Post-operatively a contaminant is

¹ V.A. Hospital, West Haven, Conn.

all that remains to the criminal law of the concept of justice which afforded it such satisfaction in better days. If we agree to this we must be convinced that talk of retribution and debts to society is a rare and uncharacteristic way of referring to criminal responsibility.

Radical surgery, of course, has its indications and Dr. Board is obviously more interested in finding a workable meaning of criminal responsibility than elucidating the common meaning. Accordingly he states that "while these [his own] value judgments may have metaphysical origins, carrying them out requires scientific rather than metaphysical conceptions." If there is no way of applying common concepts, they must be excised. But is there not a sense in which the law can be considered an operational definition of moral responsibility? The problem of workability only arises with recent attempts to make exceptions to what has in criminal law been an obviously retributive system (and which remained so long after it recognized insanity). It is a discomfiting thought that the problem of how to be more discriminating in applying the concept of moral responsibility is here solved by eliminating the entire concept. One can almost sympathize with those who learn from this not to discriminate.

We have here one further example of the failure (well illustrated in modern philosophy) to distinguish between explication and legislation. Explication is the replacement of a vague and shadowy notion with a clearly defined concept that comes as close to it as a clear concept can come to a vague one. If that vague notion is sufficiently obscure and its import distasteful to the explicator, he will be overwhelmingly tempted, while concealed in the dark, tortuous alleys of confused meaning, to secretly assassinate the offending concept and sponsor forth some favorite imposter in its stead. Legislation is so much simpler than explication and can look so like it. But perhaps of all philosophers, it is the operationalist who should have the greatest patience with the vaguenesses of the law, for this at least is already a set of operational definitions and having anticipated, so to speak, the greatest part of the

analysis, may be permitted its gaucheries and inconsistencies; if it had none the operational philosopher would have no job. Part of this job is to determine by the uses of the law, why certain wrongs are exempt from the need for retribution. To say that all are exempt, as Dr. Board does, is to abandon explication for legislation.

II

But if, as philosopher, Dr. Board should have seen how intrinsic the notion of retribution is to the criminal law, as a psychiatrist he would be expected to recognize how retributive is the punishment demanded by the conscience of the people whose law, after all, it is.

When Dr. Board asks "Where in the range of psychodynamics does moral responsibility suddenly or gradually appear?," his rhetorical question exposes itself to an answer. To be sure, and this is his main contention, nowhere do condemnation or moral directives appear as statements of psychology, but they do certainly appear *in* statements of psychology, and it is in psychology that these moral directives first receive their meaning(2). This being so, the psychiatrist is in the very best position to appreciate those retributive, punitive requirements of the mentality that creates the law. To nevertheless ignore them in the created law is as much a disservice and as ultimately futile as to pretend that people's consciences can serve solely as a guide to better behavior and never as a source of remorse or indignation.

But not only will the wise psychiatrist thus confirm what the careful philosopher finds in his analysis of criminal law; he will have the additional advantage of anticipating the confusion and contradiction seen in its application. He daily points out the ambivalence and complexity of what his patients consider to be fairly simple attitudes. He should not be the last to recognize that an institution like the law is used to implement many social aims, any two of which would be entirely consistent and compatible only by the most extraordinary accident. As a psychiatrist it better suits him to instruct the public in these divergences than to conceal them behind a false rationalization. The apparatus

the law is used for marriage counseling, child-rearing, psychiatric steering, social change. It is also used to avenge injustice. Depending on the temper of the times some of these aims may eclipse others. Eclipsed aims however vanish no more readily than repressed ideas, and will not be exorcised by labeling them contaminants. To say that punishment as a method of rehabilitation is given in the same educative spirit as in punishing a child" is to say that punishment is only rarely a method of rehabilitation. Witness the remarks of the magistrates who dispense the greatest quantity of justice in our culture.

The lesson to be learned from Dr. Board's interesting attempt to rationalize the law by heeding only its protective and corrective aims is that the search for the compound of conflicting interests served by the law cannot be impatiently replaced by a simpler reconstruction. Such a reconstruction is irrelevant to the need the law fills, which is to bring society's complicated aims to just that kind of expression demanded by their relative weights. Opinions based on an autistic law created by the expert will be properly held, in the apt words of Dr. Board's quoted opponent, not "responsive to the question the jury must answer."

The only fruitful method is to continue the difficult and frustrating attempt to follow out all the hints that the exercise of the law provides. If there is a difference between society's attitude to the child, where punishment is educative, and its attitude to the adult criminal, this is operational evidence that culpability in the law has some relation to psychological development, and it provides operational hints as to what qualifies moral guilt in the mentally ill criminal. Does an ego require a certain integration before guilt seems appropriately applied to it? In punishing are we interested in counterbalancing an action reflecting a wrong sense of values, and do we therefore require a minimum of apprehension of facts or reality-testing in order to insure that the distortion is really one of values? Are we perhaps offended by only

certain kinds of wrong value pictures? Whatever the answers, we will not discard them for inconsistency, since we know beforehand that under certain circumstances we will exercise sympathy where we might indignation, and that people will sometimes be more concerned about therapy than justice.

SUMMARY AND CONCLUSIONS

Dr. Board's objectives can only tend toward a happier society. His failure to distinguish between suggestion and analysis prejudices his worthwhile objectives in the following ways:

1. It leaves him unarmed against the resistances of society which go unrecognized.
2. It compromises the effect of the psychiatrist's most potent weapons,—expert advice and education, by concealing them in a tendentious special plea for the values of the psychiatrist.
3. In the manner of so many current political positions, it blurs the meaning of society's conflicting values by insisting that they are perfectly realized in the tissue of compromises and violations that alone can give them expression.
4. Finally, one suspects that there will come a time when the psychiatrist, accustomed to the stationary ethical foundation he has artfully built and unprepared for the heaving sea of felt principles, will feel in himself the upsurge of the rejected "contaminant" and be overcome by a moral malaise without remedy.

BIBLIOGRAPHY

1. Freud, Sigmund. *Some Additional Notes upon Dream-Interpretation as a Whole*. Collected Papers, Vol. V. London: Hogarth Press, 1950.
2. Friedman, Lawrence. *Journal of Philosophy*, 53: 15, 1956.
3. Knight, Robert P. *Determinism, "Freedom" and Psychotherapy*. In *Psychoanalytic Psychiatry and Psychology; Clinical and Theoretical Papers, The Austen Riggs Center*, Vol. 1. Knight, R. P., and Friedman, C. eds. New York: International Universities Press, 1954.

REPLY TO DR. FRIEDMAN

RICHARD G. BOARD, M.D.

In my article, "An Operational Conception of Criminal Responsibility," I tried to be as specific and precise as I could so that any inconsistencies in logical development would be easy to spot. Dr. Friedman believes that he discerns such mistakes. I hope that my objections to his objections will reassure him that I am not unfamiliar with the issues he has raised.

To begin with, Dr. Friedman points out that I did not document my assertion that the concept of moral responsibility was a metaphysical rather than scientific idea. I didn't think it was necessary to prove it for several reasons. First, what moral responsibility is, or is not, was not a central issue in my article which was concerned with setting forth an alternative to that vague idea. Second, while the subject may still be disputed by system philosophers, I believe that it is no longer taken seriously in science. For example, in one of the very articles cited by Dr. Friedman, Dr. Robert Knight makes it abundantly clear that any concept involving free choice has no place in scientific theory.

Dr. Friedman's next objections result from his failure to differentiate between criminal law as a system of proscriptions about behavior and the procedure of applying this system in the courtroom. For he quotes me as saying "the law constitutes an operation exclusively confined to the natural world of cause and effect" whereas the statement was: "the administration of the law constitutes etc." However Moses got his commandments, he had to descend the mountain to administer them in the valleys of cause and effect. Replacing a metaphysical ritual in administering criminal law by a deterministic, scientific procedure does not involve throwing away the value judgments such as justice blueprinted in the laws to be administered.

In the midst of this confusion, Dr. Friedman introduces a quotation from Freud in order to show that moral responsibility has something to do with cause and effect. Please note that Freud uses the term *responsible* rather than *morally responsible*. What does *responsible* mean in this context? To clarify

this, let me translate the quotation into more precise language: "Obviously, a constellation of forces within the individual results in the 'evil' impulses in his dreams. What other forces can cause them? Unless the content of the dream . . . is inspired by alien spirits, the location of these forces causing the dream is within the dreaming individual." Perhaps also implied is this: "And so it is to this individual and these forces that we apply the forces of therapy." Now certainly this statement is naturalistic enough. With but slight modifications it could apply to almost any animate or inanimate event. In this sense, a landslide is responsible for obstructing traffic and a murderer is responsible for his victim's death. "Responsibility" is used as a way of referring to cause and effect linkage and to locate the forces involved within a certain individual. And it means no more. But this is not the moral responsibility of the courtroom nor the criminal responsibility founded on that concept. If it were, how could we find even the sickest dreamer "irresponsible." If this kind of courtroom responsibility indicates causal linkage between actions and the personality, who could ever be judged irresponsible? What causes the "freakish, spontaneous act totally unrelated to the personality"—an alien spirit? As scientists we would do well to drop the whole idea of responsibility. It isn't needed to get things done with everything in the universe except human behavior and it isn't needed to get things done with human behavior. In my article the quantitative operational concepts of deterrent efficiency and efficient punishability replace the confusing idea of criminal responsibility.

Dr. Friedman's concern that I may have introduced some value judgments of my own in pronouncing retributions or vengeance an unworthy contaminant in the judicial process seems to stem primarily from his failure to appreciate that there are 3 general levels involved in criminal law. First, there is the blueprint for behavior, the laws themselves. Second, there is the blueprint of how to administer the laws. Third, there is the administration of the law by the all too human

judge and jury. My paper concerned the second level, the blueprint of how to administer the law, explicating the current value systems involved and the logic of their application to the natural world of criminal behavior. Regarding the value judgments inherent in the blueprint for administration, my point was that they have gravitated away from retribution and toward correction. Such things as public hangings, floggings, cruelty toward the imprisoned and other food for vengeance are discouraged these days because of this change in values regarding the administration of the law. Retribution and vengeance toward the criminal still flourish, as Dr. Friedman points out, but only at the third level, the all too human performance in the courtroom. But they are continually hedged in and circumscribed by the blueprint of administration. I say all too human because the law and the blueprint for its administration seek to be better than any man—more impartial, less vengeful, etc. This is one reason we prefer a government of law rather than men and regulate the administration of law rather than trusting too much to the emotional vagaries of judge and jury. In regard to the trend in values characteristic of the blueprint for administering the law, the emotions of judge and jury, vengeful or otherwise, stand as contaminants in the judicial process of government by law. In view of the progress already achieved in circumscribing these contaminants, Dr. Friedman need not be too pessimistic about further improvements.

Next comes Dr. Friedman's assertion that I was too selective in my operational analysis of criminal procedure in conspicuously omitting vengeance toward the criminal. I have already indicated why this portion turns out to be a contaminant in regard to enlightened administrative blueprints. But Dr. Friedman's conception of operational analysis intrigues me. Unfortunately, there has been a trend toward broadening the concept of operational analysis since Bridgman first formulated it until it can cover almost anything. Thus it is becoming a favorite of philosophers. It is possible that Dr. Fried-

man, in his role of careful philosopher, has achieved the *reductio ad absurdum* for this trend. As I get it, he seems to feel that any vague idea can be operationally analysed—even the magical rituals of the primitive, I would suppose. But there are concepts that are operationally meaningless and in such cases there is no alternative but to legislate rather than explicate. I regard moral responsibility as just such a concept. The fact that an elaborate courtroom ritual exists whereby it is supposedly applied confers no more operational validity upon it than conceiving of golden mountains will make one rich. As I indicated explicitly in my article, I set out to redefine criminal responsibility and made no bones about the fact that I was not intending an operational analysis of moral responsibility. I don't think any is possible. Dr. Friedman need not fear that the concept of moral responsibility will be assassinated in "the dark, tortuous alleys of confused meaning." That is where it thrives.

Regarding correction *vs.* retribution as an aim of the law itself, I am reminded of Professor Stace's observations on the subject. The impositionist theory, personified by Moses obtaining the law from God, holds that laws are imposed on mankind from without. The immanent theory holds that laws are evolved by mankind. Science has tended to confirm the latter. The law is viewed as an institution evolved by societies to maintain themselves. As adaptive mechanisms the laws and even the idea of retribution are corrective mechanisms maintaining society. Like many corrective mechanisms, retributive law is as inefficient in the long run as a neurotic symptom.

Having been jumped so frequently between the roles of philosopher and psychiatrist in Dr. Friedman's paper, I would seek final asylum in his role of wise psychiatrist. He had some nice things to say about my article before the inevitable, "however," and this suggests to me that our agreement may be more extensive than our differences. In turn, I have had to be abrupt and unconstructive. I hope that both of our discussions will stimulate further study of my article.

SOME PSYCHIATRIC NOTES ON THE *ANDREA DORIA* DISASTER

PAUL FRIEDMAN, M.D.,¹ AND LOUIS LINN, M.D.²

On July 25, 1956, at 11:05 p.m., the Swedish liner *Stockholm* smashed into the starboard side of the Italian liner *Andrea Doria* a few miles off Nantucket Island, causing one of the worst disasters in maritime history. The authors were passengers on the Europe-bound *Ile de France* and spent approximately twelve hours, independently, interviewing and observing the survivors, the crew of the *Ile de France* who participated in the rescue operation, and the passengers aboard the *Ile de France*. It must be noted that the cause of the disaster was purely a matter of speculation at the time and there was no factual basis for establishing culpability for it. Subsequent inquiries succeeded in establishing the circumstances of the accident, and the authors are gratified that their observations can now be measured in terms of confirmed facts and thus assume more realistic value. For, as psychiatrists and psychoanalysts who happened to be on the spot, we were in a unique position to make immediate observations. Our data, carefully recorded after interviews with a large number of people, do not constitute a systematically scientific study of the experience, but may represent a modest contribution to the psychology of disasters.

THE STATE OF INITIAL PSYCHIC SHOCK

The emotional state of the survivors may be divided into two distinct phases: the state of initial psychic shock and the recovery phase. During the phase of initial shock the survivors acted as if they had been sedated. It is noteworthy that but a minimal quantity of sedative medication had to be administered during this time. Thus, it was as though nature provided a sedation mechanism which went into operation automatically in most cases. The survivors presented themselves for the most part as an amorphous

mass of people tending to act passively and compliantly. They displayed psychomotor retardation, flattening of affect, somnolence and, in some instances, amnesia for data of personal identification. They were nonchalant and easily suggestible.

Comment.—The attitude of helpless dependency identifies this condition as a state of emotional regression in which people who are normally capable of functioning on an emotionally mature, adult level become childlike in their feelings of personal inadequacy and in their tendency to overestimate the powers of those offering help and leadership. In their state of shock, the survivors of the *Andrea Doria* could be compared to the survivors of the concentration camps who were found to have developed a state of affective anesthesia as a defense against the dangers and anxieties to which they were continuously exposed (7, 8). As early as 1918, the same reaction pattern was observed by Jones (9) as well as by Ferenczi, Abraham and Simmel (2) in victims of war shock; and when Freud (5) spoke of a "protective barrier against stimuli" (*Reizschutz*) he actually defined a mechanism which is probably mediated by the ascending, activating reticular system which protects the central nervous system when exposed to stimuli of excessive intensity. Because of this protective mechanism the survivors of the *Andrea Doria*, at first, could not be approached or induced to talk.

THE PHASE OF RECOVERY

After their initial shock had worn off, it became possible to question the survivors. As a matter of fact it was usually unnecessary to ask questions, since so many of them had a great need to tell their story. And they did tell their story, over and over again, to anyone who would lend a willing ear. Characteristically they showed pressure of speech and an apparently compulsive need to tell the story again and again, with identical detail and emphasis.

¹ Associate Attending in Neuropsychiatry, Beth Israel Hospital, New York City.

² Associate Attending Psychiatrist, Mount Sinai Hospital, New York City.

Comment.—We were impressed with the similarity between these repetitive narratives and the repetitive dreams of the traumatic neurosis. Each represents a psychological reliving of the trauma, as part of an attempt to master an experience that had proved overwhelming.

PREJUDICES AND PARANOID ATTITUDES

We were struck by the frequency with which the survivors who spoke to us were angered. They expressed certainty that the accident was the fault of the *Andrea Doria*, even though the details of the catastrophe—such as the extent of the survivors' misery, the irreparable loss of the beautiful ship, the relatively intact state of the *Stockholm*—favored sympathy on behalf of the *Andrea Doria*. This prejudice was based on the *a priori* acceptance that Swedes are dependable, faultless sailors and people of impeccable integrity and reliability, while Italians on the other hand are childlike and irresponsible, tending to pursue their pleasures instead of their duties.

Comment.—It is interesting to remember at this point that during hearings investigating the causes of the *Titanic* disaster in 1912, the term "Italian" was freely used as a synonym for "coward." "There were various men passengers," declared Steward Crowe of the *Titanic* at the U.S. inquiry, "probably Italians, or some other foreign nationality other than English or American, who attempted to rush the boats." This contention, proven false, formed the basis for a successful libel suit against this officer. It is also somewhat ironic to recall that in his book on the *Titanic* disaster, *A Night to Remember*, published less than a year before the *Andrea Doria* catastrophe, Walter Lord (11) expressed the view that some of the prejudices of the age went down with the *Titanic*, notably the belief in the superiority of Anglo-Saxon courage. Such a notion was proved overoptimistic by opinions voiced aboard the *Ile de France*. The absolute necessity for finding a scapegoat, for locating somebody who was at fault, found at outlet once again in the paranoid projection of prejudice on the part of people on the *Ile de France*; not only demonstrating that stereotype thinking

is still prevalent, but dramatizing its capacity to dominate opinion during periods of crisis and its influence in distorting perception and judgment.

Such attitudes are familiar expressions of the quest for a scapegoat, a psychological device for turning aggression outward. It is part of the overall attempt to master an overwhelming trauma. The survivors' tendency to blame the *Andrea Doria* for their misery derived from their feeling of having been failed. They suffered a narcissistic injury which may be compared to the feelings of a child who finds that the strength of his father has turned out to be a fallacy. Let us not forget that the *Andrea Doria* had been considered unsinkable, which conveyed a great sense of security in her passengers; yet there they were having to abandon her and being abandoned by her, experiencing the inability of a parent to cope with disaster.

The facts are that the crew of the *Andrea Doria*, with the expected exceptions, acted with generosity and even heroism. It has been recorded by Cornelius Ryan (13) in an article for *Collier's* and by Walter Lord (12) in an article for *Life* how an Italian cabin-class waiter and several Italian crew members cooperated in trying to free the wife of a passenger from beneath a collapsed partition, spending five hours in the futile effort. Many other instances of helpfulness and altruism on the part of crew members are on record, leaving no basis for condemnation.

Expressions of prejudice were not confined to fixing the blame for the accident on the *Andrea Doria*, but also manifested themselves in the contempt voiced by some passengers on the *Ile de France* toward Italian immigrant survivors because of their uncontrolled demonstrations of despair. To some who expressed these feelings it was explained that patterns of emotional expression are culturally determined and that they vary, in a given national group, from one economic stratum to another. It was also indicated to them that the control of emotional expression under stress is not a reliable measure of courage and strength of character; furthermore, that from a psychiatric point of view the expression of one's true feelings, particularly during bereavement,

serves a useful adaptive function in the mental health of the individual.

Such opinions among *Ile de France* passengers thus were clearly based on paranoid projections of stereotyped prejudice, in contrast to the reactions of the rescued whose resentment toward the *Andrea Doria* stemmed from the violent destruction of their sense of security and dependence.

THE PROBLEM OF COMMUNICATIONS

The most frequently voiced charges were: that no announcement had been made about the nature and gravity of the accident, and that no concerted rescue effort was made.

Comment.—These have been answered by the fact that the first impact of the collision caused a power failure on the *Andrea Doria*, putting the public address system out of commission. Moreover, the ship rapidly developed a severe list which, coupled with oil slicks on the decks, made it imperative for each person to save himself from sliding into the sea. These circumstances also made it almost impossible to circulate information on foot. As a matter of fact, Italian crew members did make their way about on the sharply inclined decks, urging passengers to remain calm, and there was indeed very little panic.

LEADERSHIP

The foregoing facts compel a consideration of the problem of leadership in crises. Because of the conditions on the *Andrea Doria* just described, groups of people were largely immobilized and isolated; this created a necessity for each group to evolve its own leader. In several instances, priests and nuns stepped into the breach. By virtue of their training they were prepared to do so, just as the predominantly Italian Catholic immigrant group was prepared by training to accept their leadership. Primarily they participated in the practical problems of the rescue operation, only secondarily providing religious solace to those who asked for it. In other groups there were individuals not otherwise identifiable who likewise assumed leadership voluntarily.

Comment.—The willingness of some people to assume leadership of a group in dis-

aster situations has repeatedly been observed, and a systematic study of such individuals might help us to identify the qualities that make for leadership, enabling us to concentrate our civil disaster training on such persons. The existence of a corps of trained people endowed with qualities of leadership may make the difference between success and disaster in community emergencies. A leader who understands the psychological importance of identifying with a group, as a device for combatting feelings of individual helplessness and despair, will make use of techniques which promote positive group action. Not only is effective leadership the most important weapon in combatting mass hysteria, but, as stated by Sperling (14), mass hysteria as such can be defined as a failure of leadership. Whether a group reacts to a crisis with self-control and cooperation or with egotism and chaos depends almost entirely upon the quality of leadership, and the vital importance of developing able leaders is well illuminated by Freud's (6) statement in the *New Introductory Lectures on Psychoanalysis*: "A psychological group is a collection of individuals who have introduced the same person into their super-ego, and on the basis of common factor have identified themselves with one another in their ego."

CHILDREN IN DISASTERS

The application of the "women and children first" principle on the *Andrea Doria* resulted in some poignant and, in at least one case, tragic separations and isolations. It can be said that this principle, which prevails in our culture during catastrophes, frequently results in the isolation of children from their parents with possibly disastrous psychological consequences.

Comment.—This view finds ample support in the Freud-Burlingham (4) reports on *War and Children*. During the bombings of London in World War II it was repeatedly observed that children exposed to extremely violent bombing scenes, even those partly buried by debris, showed no particular signs of having been affected if they were in the care of a parent during such incidents. Bombed-out children would arrive at a shelter, in the middle of the night, showing no

undue disturbance when accompanied by parents or by familiar parent substitutes. Serious psychological disturbances were confined largely to children separated from their parents during such experiences. It was the main conclusion of the Freud-Burlingham reports that such disasters as war have comparatively little significance for children so long as they only threaten their lives or material comforts, but become enormously important the moment they break up family life and uproot the first emotional attachments of the child within the family group.

In another study of emotional reaction of children to disaster, Bloch, Silber and Perry (1) clearly established a post-disaster increase in dependency needs characterized by symptoms of regressive behavior. They observed that a greater need for belonging and a reaching out for others were typical disaster responses in children, but that such manifestations would tend to be arrested or at least alleviated by the presence of a parent during disaster situations.

These principles found a practical application during the Arab-Israeli war of 1948 when the Israelis adopted the practice of requiring one parent to remain with the children if the other were assigned to a hazardous mission, so as to minimize the likelihood of children becoming doubly orphaned. The authors are convinced that a modification of the "women and children first" rule by insistence that a parent accompany the child, even if the only parent available be the father, would represent a sound application of modern psychiatric insights.

OFFICIAL IDENTIFICATION LISTS

The lack of an official list of survivors contributed to the delay in the reunion of families separated during the disaster. As far as we could ascertain, such a list was not initiated with the rescued during their stay aboard the *Ile de France*; this and similar delays on other vessels and at collection centers may account for the fact that several days passed, in some instances, before families were reunited.

Comment.—Prompt establishment and publication of such identification lists is an important leadership device in combatting

panic and maintaining morale. This device serves a twofold purpose. First, it is reassuring to the bewildered survivor to be recognized as an individual; the mere recording of his name, address and next of kin helps to re-establish, in his mind, the intactness of his shattered ego. The instances of amnesia during the initial psychic shock phase, to which we referred above, tend to support this concept. Secondly, to expedite the reconstitution of broken family units is a matter of equal psychiatric importance for the isolated individual. A considerable number of passengers on the *Andrea Doria* were immigrants coming to the United States, for whom the catastrophe represented a complete loss of identity in both the physical and the psychological sense. For members of this group, the loss of their passports constituted the end of their individuality; in contrast to the tourists, for whom the loss of passports was merely a transitory predicament which failed to damage their identity: they could always return to their background, their money and their roots. But for the immigrant the passport symbolized not only his individual identity, but also his sense of belonging, and it is not surprising that to save it was of greater importance to him than the saving of physical property. Those who could save their passports managed to maintain their pride, even if they had lost all their material belongings; those who failed to save them became "stateless persons," temporarily at any rate, whose whole sense of belonging went down with the *Andrea Doria*. The publication of an identification list of survivors would have brought a great measure of relief to these people for whom the loss of a passport also meant a discontinuation of their body image, a psychic loss which would have been relieved by being included on such a list.

REACTIONS AMONG THE ILE DE FRANCE PASSENGERS

Many lay persons, in subsequent discussions of the *Andrea Doria* disaster, have remarked: "How depressing it must have been! It must have cast a pall over the rest of your trip." This attitude, which implies a deep identification with the victims, can be

summarily dismissed. To our knowledge, there were only a few passengers who became so depressed that they decided to interrupt their trip to Europe and return home when the *Ile de France* docked at New York. It was not difficult to ascertain that these people had been depressed prior to their departure and that their depression was merely reactivated by the events at sea. In general the impact of the catastrophe did not have as disruptive an influence as one might think.

Comment.—It must be remembered that most of the passengers on the *Ile de France* were asleep at the time of the collision. They were stupefied when, upon awakening, they found out what had taken place, and manifested rather a feeling of shame and of having been cheated of the experience. One of the authors vividly recalls his feelings of anger at not having been awakened and of deep disappointment when his services were not needed. The passengers somehow reminded one of soldiers during a war who have remained behind the front lines and never got to see a real battle. This usually generates a sense of guilt, which no doubt was also present in all the passengers who showed a readiness to help as much as they could and even displayed acts of generosity.

All this points to a confirmation of the principle that guilt can be a positive force of social good when given proper channels of expression in terms of morality and social approval; in the process, personal neurotic anxiety and depression may be relieved.

PERCEPTUAL DISTORTION

Several passengers on the *Ile de France* were awakened by the sound of lifeboats being lowered to pick up the *Andrea Doria* survivors and went back to sleep with the thought, "this is only a drill and is of no concern to me." One man expressed this aloud to his wife and got up, reluctantly, only at her insistence that drills do not take place at 2 a.m. A particularly fascinating experience was reported by a man who heard voices outside his cabin. He got up and saw several lifeboats in the water. The people in them wore the conspicuous orange-red life preservers, and in the brilliant spotlights of the ship these colored life preservers had, to

his mind, a festive quality. The sounds outside, which were actually expressions of misery, sounded to him like laughter and gaiety. It seemed, to quote him, "like a carnival in Venice." He went back to bed muttering to himself that this was carrying the Frenchman's love of fun a little too far and that one should not cavort so noisily in the middle of the night. He was just falling asleep when the true significance of what he had seen hit him, and he leaped from his bed and got dressed. Several others reported hearing sounds outside the portholes which they interpreted as sounds of festivities and merriment.

Comment.—In each of these cases we find perceptual distortions which parallel those taking place in sleep. Stimuli received during sleep are transformed into dreams that encourage the continuance of sleep. In our examples the subjects were already awake, but interpreted their sensory impressions in such a way as to justify a return to sleep; i.e., in a way designed to relieve anxiety which would disturb sleep. Instances of sensory distortions under similar disaster circumstances are described in Lord's (11) book on the *Titanic*:

Individual voices were lost in a steady, overwhelming clamor. To Fireman George Kemish, tugging at his oar in Boat 9, it sounded like a hundred thousand fans at a British football cup final. To Jack Thayer, lying on the keel of Boat B, it seemed like the high-pitched hum of locusts on a midsummer night in the woods back home in Pennsylvania.

PROPERTY

During the evacuation of the *Andrea Doria*, most passengers were forced to abandon their belongings. Such exigencies throw an illuminating light upon feelings toward property in disasters. What do people try to save under these circumstances? What do they choose to take with them in the process of trying to save their lives?

The main concern of the immigrant group was focused on the effort to save their passports, disregarding articles of material value. For members of this group, as we have noted, a saved passport meant the continuation of body image, the tangible affirmation of survival, the maintenance of their sense of belonging and pride. But of course, too,

the saving of valuables appeared to be secondary. In some instances, women already enjoying the safety of a lifeboat would drop their jewelry into the ocean.

Comment.—One might speculate about the sacrificial symbolism of such acts which imply the offering of sacrifice as an expression of gratitude for the sparing of life. The fact that a lady who had saved her mink stole became the object of ridicule would seem clearly related to such feelings. While behavior observed during the sinking of the *Titanic*, like our notes on the *Andrea Doria* catastrophe, revealed a rich variety of attitudes toward property, the former would equally tend to confirm the existence of a need to offer material sacrifice in exchange for life. The following examples are taken from records of the *Titanic* affair. One person took with her a musical toy pig, another a bible, another a revolver and a compass, another only books, another four oranges. Two outstanding instances were noted in Lord's book, both expressing a curious disregard for valuable belongings: one was the case of Mrs. Dickinson Bishop who, having left behind 11,000 dollars' worth of jewelry, sent her husband back to the cabin for her muff, the other, the famous decision of Major Arthur Peuchen to abandon 300,000 dollars in stocks and bonds and to take merely a good-luck pin and three oranges. Although there were others, like Mrs. Adolf Dyker, whose main concern was the saving of their jewelry, the outstanding feature of property rescue was the secondary importance attached to articles of monetary value. The authors found a striking parallel, in these reports, to incidents observed in the more recent disaster.

CLOTHING

In the course of leaving the *Andrea Doria*, most passengers had to shed their shoes and partially also their clothes. Thus they came aboard the *Ile de France* shoeless and, many of them, scantily clad. Crew and passengers of the rescue ship were generous in their contribution of clothing articles; yet it caught our attention that some of the survivors, mainly among the younger people, were not too eager to accept the garments

thus offered to them. But their attitude was in sharp contrast with that of the majority who felt deeply ashamed at being unclad and, when given clothes, expressed their feelings of becoming dignified human beings again.

Comment.—These people looked upon clothing—as Flügel(3) observed in his brilliant exploration into the psychology of clothes—as protection against the unfriendliness, the enmity of the world as a whole, and as reassurance against the absence of love and security. Being in unfriendly surroundings—and to these people, who had to abandon the familiarity of their own ship, the chilly decks of the *Ile de France* must have appeared unfriendly—their natural tendency was to button up, to wrap garments around their bodies. They felt agreeably strengthened and supported by clothes in such circumstances.

It was interesting, therefore, to speculate on the motivations of those younger people who hesitated to accept the offers of clothing. One might ascribe to them, on the one hand, a feeling of bravado and assumed poses of heroism, possibly tending to exploit their situation in the hope of obtaining greater, more substantial rewards upon their arrival in New York, in the manner of a child who rejects a small toy while waiting for a bigger one. On the other hand, and perhaps more significantly, one might conjecture that they were also gratifying exhibitionistic fantasies; i.e., that they derived a narcissistic pleasure from the display of their bodies and that their lack of eagerness to accept clothes indicated a hesitation to sublimate it.

The behavior of both groups with regard to clothes, as well as the contrast between the two attitudes, provides a striking dramatization of Flügel's findings that articles of clothing are essentially in the nature of a compromise between conflicting elements for the establishment of harmony, in the same way as neurotic symptoms represent a compromise between conflicting and largely unconscious impulses.

SUMMARY AND CONCLUSIONS

We have presented observations concerning the phases of initial psychic shock and of recovery; prejudices and paranoid attitudes;

the problems of communications, of leadership and of children in disasters; the role of official identification lists; reactions among the *Ile de France* passengers; instances of perceptual distortion experienced by the latter; and various attitudes of the survivors toward personal property and toward clothing.

It is our hope that these observations will be of interest and possible value to those concerned with the psychological problems of civil disasters. The sinking of the *Titanic* in 1912 prompted major reforms and improvements in the physical aspects of safe navigation. Our psychological exploration of the *Andrea Doria* disaster, unsystematic though it be, points to avenues of further study into the following areas:

(a) Our notes on the role of prejudice in the development and resolution of crisis might merit the attention of the World Federation for Mental Health in its program for the prevention of social and individual emotional disorder through the systematic search for tension-reducing techniques. Our observations also emphasize the importance of paranoid reactions which are apt to arise in crises and to intensify conditions of chaos.

(b) The *Andrea Doria* experience points up the fallacy that all disaster training must be based on the expectation of nuclear warfare. Men of leadership caliber who shy away from preparations for atomic attack might participate more wholeheartedly in programs which emphasize training for such peacetime disasters as may befall anyone.

(c) The introduction of leadership devices that are based on established psychological needs. In our discussion of the "women and children first" principle we pointed out the desirability of having at least one parent accompany the child. The need for such practice has been amply demonstrated during previous crises in recent his-

tory. The importance of a speedy method of collecting and publishing survivor identification lists in disasters has also been established as a major device designed to aid survivors in maintaining their identity and to alleviate the traumatic content of their experiences.

The authors do not attempt to draw any general conclusions on human nature from the *Andrea Doria catastrophe*. But they do believe that the introduction of modern psychiatric principles in these areas will effect progress in important aspects of human welfare.

BIBLIOGRAPHY

1. Bloch, D. A., Silber, E., and Perry, S. E. *Am. J. Psychiat.*, 113:416, Nov. 1956.
2. Ferenczi, S., Abraham, K., and Simmel, E. In *Psycho-Analysis and the War Neuroses*, pp. 5-43. London: International Psycho-Analytical Press, 1921.
3. Flügel, J. C. *The Psychology of Clothes*. London: Hogarth Press, 1930.
4. Freud, A., and Burlingham, D. T. *War and Children*. New York: Medical War Books, 1945.
5. Freud, S. *Beyond the Pleasure Principle*. London: International Psycho-Analytical Press, 1922.
6. Freud, S. *New Introductory Lectures on Psychoanalysis*. New York: W. W. Norton & Co., 1933.
7. Friedman, P. *Acta Medica Orientalia*, 7: 163, 1948.
8. Friedman, P. *Am. J. Psychiat.*, 105: 601, Feb. 1949.
9. Jones, E. In *Psycho-Analysis and the War Neuroses*, pp. 44-59. London: International Psycho-Analytical Press, 1921.
10. Linn, L. In *A Handbook of Hospital Psychiatry*, pp. 508-515. New York: International Universities Press, 1955.
11. Lord, W. *A Night to Remember*. New York: Henry Holt & Co., 1955.
12. Lord, W. *Rescue at Sea*. *Life*, Aug. 6, 1956.
13. Ryan, C. *Five Desperate Hours in Cabin 56*. *Collier's*, Sept. 28, 1956.
14. Spierling, O. E. In *Psychoanalysis and the Social Sciences*, 4: 83-93. New York: International Universities Press, 1955.

GROUP PSYCHOTHERAPY: INDIVIDUAL AND CULTURAL DYNAMICS IN A GROUP PROCESS

MARVIN K. OPLER, Ph. D.¹

Group psychotherapy depends on the dynamics of three processes. These processes are interwoven. Simultaneously, they involve the group, the individual and his cultural background. To date, there has been relatively little attention paid to this interweaving of three basic elements, their relative weight or effects, and the influence of one upon another during treatment. Since group techniques are used constantly and increasingly in hospitals and in private practice, a systematic approach to the total process is required.

This account discusses relevant aspects of the total process in which each term, the group, the initiator of therapy (the psychiatrist), treated individuals, and a variety of cultural backgrounds all play a role. For purposes of analysis, these relevant aspects of the listing just given must be determined. We therefore discuss them in the order of (a) the group, (b) the individuals and (c) cultural backgrounds represented by the physician and the treated individuals. In so doing, we shall deal with affective constants and variables associated with the terms listed as if they represented a continuum ranging from more optimal emotional conditions to those involving greater disturbance. We therefore begin with the group.

While most group psychotherapy involves Freudian presuppositions, Freudian notions of a necessary procedure are often lost in the complexity of the group process. We shall regard Freud's voluminous writings on psychotherapeutic procedures as being in "the public domain" and shall purposely avoid a list of specific references. However, such various works as Freud's *Interpretation of Dreams* or his *Constructions in Analysis* readily come to mind as instances of the assertion that therapeutic interpretations are really reconstructions of the past. In *Constructions in Analysis*, for example,

it is stated clearly that only further steps in the analytic procedure enable the therapist to decide upon "correctness or uselessness" of such constructions. This operational procedure in psychoanalysis, which Freud stated was conjectural, awaiting "examination, confirmation, or rejection" really accords well with the operational and exploratory character of most group sessions. However, Freud paid little attention to concomitant group influences in treatment sessions. Even in the *Psychopathology of Everyday Life*, the impression one has is that two-person situations, rarely with a modest audience of onlookers, predominated. Many of these instances involved the individual and his errors of omission or commission, acting alone.

What, then, does the group—even a somewhat amorphous and experimental one—add to this picture? The last decade has seen great development of research interest in the organization and functioning of small groups. Hare, Borgatta and Bales have assembled much of this literature(5). From mountains of research, the flowers of information are rare, but they have definite uses, when catalogued, for group psychotherapy. In 1940, the anthropologist, Chapple, discovered all persons have characteristic or normative rates of communication, described as interaction levels. Experimentally, the rates showed modification by interaction constants of others in the same situation. For example, as politeness or shyness in strangers wore off as a function of time spent together, each approached their already noted, or normative, levels(3).

Psychiatrists add to this a crucial observation, namely that a mental illness may drastically modify such normative interaction levels of personal communication still further. Again to cite theoretical statements of this idea, already in the public domain, one could note that this particular observation formed a large part of Sullivan's *Interpersonal Theory of Psychiatry* or of Fromm-Reichman's *Principles of Intensive Psy-*

¹ Vis. professor of anthropology (social psychiatry), department of psychiatry, Cornell University Medical College, New York City.

chotherapy. Stanton and Schwartz's *The Mental Hospital* is a third well-known work replete with such instances. What is arresting about these three well-known works, taken together, is that they stress almost with increasing emphasis that the interpersonal theory of illness, or the interpretation of schizophrenia given by Fromm-Reichman, or the responses of patients to milieu reported by Stanton and Schwartz record the levels of personal communication as functions of both longstanding illness processes and more contemporaneous experiences. Although the parallel literature from group psychotherapy is too extensive and scattered to adduce here, group psychotherapists know that a particular "emotional climate" or discussion-sequence may modify individual and group interaction rates noticeably.

In the field of small group research, rate is the *quantity* or *amount* of human, symbolic interaction. We already know this quantity, as a total, is increased in the group process. However, besides the quantity or amount, there is the further question of the quality or depth of expression. In the three volumes mentioned, it is stated both theoretically and concretely that *quality* or *depth* of expressive communications may range from superficial to highly expressive symbolizations of subjective states. Small group research has often not troubled to make such distinctions as to content. Yet, in psychiatry, the quality or depth of the content of communications has been of overwhelming importance as soon as psychodynamics became a central focus of therapeutic procedures.

However, while amount or depth of communications has each been noted in psychotherapy, a third element seems to be involved if we are to deal with affective constants and variables associated with the terms we have listed. Both small group research, and considerations of the depth of expression, may easily overlook this third aspect. While the Freudian system suggests expressions in depth may be cathartic, increasing emphasis on ego structure has warned against an unbridled flooding of impulses. Much of this discussion has been couched in terms of transference and countertransference as if larger group relationships hardly existed.

The author, therefore, introduces as the third term the *emotional valence*, or *combining power* of an affective state, and of its verbal and non-verbal symbolizations. Here one thinks not simply of depth of emotion, but of characteristic style of affect. Polar examples might be hostile or cooperative utterances. But in reality, human behavior is so modified by symbolic constructs resident in cultures and in subcultures that no individual exposed to cultural backgrounds at all fails to incorporate emotional valences towards persons, objects and ideas. These are best called human *and* cultural values. Obviously, they relate to the social role expectancies and functioning of persons in a static or in a changing cultural scene. Equally, the social roles and statuses are themselves dynamic and multiple since they apply throughout the life-cycle.

To illustrate, in a scale, one who has participated in group sessions can discern the illness polarity in low rates of interaction as to quantity, depth or emotional valence. Actually, these aspects interblend or interpenetrate, affecting one another. For example, low rates of interaction may be mixed, or modified by, hostile non-verbal communications. As is known from studies of schizophrenics, the rate of interaction should not be confused with lack of reaction. Blocking, rigidity and withdrawal may all be defenses changing interaction rate. Similarly, on the levels of depth of expression, these impediments may be patterned or sharpened as habitual response to be denial, circumstantiality and only superficial contact with the tests and identifications of reality. Then, indeed, one is contrasting this lack of realistic spontaneity with forms of participation that are emphatically sincere and honest. Here we have been thinking of quantity and depth, respectively, in interaction processes. For the third term, emotional valence or style, the illness polarity may disclose, for example, generally antagonistic, resentful or revengeful modes of interpersonal expression as typical. Quantity, depth and style (or emotional valence) are, taken together, indices of the dynamics of an illness; and without this methodological organization or specific type of recognition, they have already

been utilized in successful individual or group psychotherapy.

In respect to the interrelations of these elements, we have already noted that quantity *increases*, in affective stimulus or response, mark both the normative and the therapy group. Why is this? First of all, the affective stimuli are increased by the presence of several persons, but in addition, Borgatta and Bales learned that an individual typically tends towards his maximum rate of participation, modified for each by respect for the participation of others(2). In such striving behavior, there may be attempts at mastery, coping or reward-seeking since Keller found experimentally that those who initiate more discussion usually have more remarks directed to themselves(6). One learned also by experiment that groups arranged in circular (democratic) and intimate face-to-face patterns, without intermediate dominating figures, had both more interaction and superior morale as a result, Bales adding to this that the optimal size is the 5-person group. Miller has noted in the same context of small group research as Bales(5) that there are limits to our natural capacity for processing information, and that 5 to 7 units mark limits for visual and tonal stimuli, beyond which, at 8 or more, errors are common. (Compare 1 and 8.) Like the "span of immediate memory" or digit span tests, 7 appears to be a common limit.

In anthropology, both Murdock(9) and Lowie(7) have noted the universality of the "nuclear family" of parents and children, with kinship systems beyond this unit ignoring, restricting or creating and expanding such natural bonds through terminological notations. The nuclear group terms, however used—and the systems are several in world history—seem to run parallel to what is learned as to optimal size of human small groups though the actual individuals noted may far exceed the denotative kinship calculus used to categorize them. These data on human social organizations corroborate Bales' experimental data on the "best" size for maximizing interaction, except that here social organizational realities require humans to apply denotative kinship terminologies to often vast groupings, like clan relatives,

which exceed common intellectual capacities.

In group psychotherapy, one is dealing neither with normative family structures nor kinship variations. Even the abstractions of normative group processes, their quantitative and interaction findings must be taken together with considerations of the depth and style of individual communications as affected by group process or milieu. Thus, depth and emotional valences become somewhat more germane than the quantitative matters just reviewed. As with kinship systems in culture, though there are quantitative parameters indicated by the human limits for processing information, the information itself must be processed in patterns that are both personally and socially meaningful to the individual, or they become lost items in the business of living. In the serious work of role-playing, we can only assume or interpret roles that have some symbolic meaning and significance. As participants in any settings, group-oriented or individually expressive, role-conflicts are bound to impede action, emotion or cognition where they proceed from a splitting of values, meanings and goals. Both neurotic conflicts in which the struggle for a meaningful integration is still going on, and psychotic splits in which roles are curiously divorced from realities express the resultant states, the balances and imbalances, achieved in the service of role conflicts.

Group psychotherapy, according to Dreikurs, developed "almost incidentally" within psychiatry as a form of treatment devised "primarily to save time for the overburdened practitioner(4)." This is true, but almost equally there was a sense of generic similarity in problems of role functioning of classes of patients. Pratt, designated by some as "the father of group psychotherapy," discerned near the turn of the century a common problem in lower class tubercular patients connected with the isolation and sense of secrecy and shame connected with this disease, and its recognition and management. Accordingly, he used the group technique to create hope and give patients instruction about the management of tuberculosis. In the mental hospital, both Lazell and Marsh suggested total push methods in application to

schizophrenia, creating awareness that psychotics received benefit or "revival" from social interests and responsibilities. Adler applied the method in a more preventive sense to teacher and parent groups, again social role categories. (Compare items under 14, Pratt to Adler.) There is no doubt that current group psychotherapy in mixed groups has moved from these basic considerations, but it is as concerned today with role-conflicts exhibited within individuals and in groups as it ever was.

Dreikurs, in the article alluded to above (4), claims the "First Psychiatric Revolution" occurred with the introduction of humane treatment in mental institutions. The "Second, or Psychoanalytic Revolution" may be designated in his fashion as stressing early development and family experience (our emphases, M.K.O) in an era of "accentuated individualism" during which the psychiatrist "moved into private practice" (Dreikurs). Whichever aspect one stresses, the role of the physician, or the tendency to extend the interpretation of human relationships in the light of the patient's experience in the family, the latter were, as Dreikurs has noted, explored chiefly through individual psychotherapy following the recognition of the dignity of the person. It is easy to underestimate the importance of the psychological development of the individual in a family setting. In terms of our own methodological organization, we may note that the current emphases on small group dynamics—the typical sociometric and quantitative approaches to interaction—equally underestimate roots of family settings in typical subcultures of our times. While the quantitative approach to interaction may recognize human limits and potentialities for communication, such discussions of human optimum capacities are abstract unless both family and cultural role conflicts are explored. It is no accident that while group psychotherapy left the door open for Freudian and Neo-Freudian experiments in the quality or depth of expressive communications, it said less about emotional valences or basic styles of affective role conflicts.

However, besides the individual and the

group, and the concerns respectively for depth of affect and quantity of interaction, there are the affective patterns or styles of emotional expression which are chiefly an outcome of cultural role conflicts. Anthropology has long recognized these, without systematization in any given theory of personality, under the rubric of *acculturation*. The author, in working with Linton, and in focusing upon acculturation differentials where two cultural groups were involved in cultural change and interchange, noted in 1940 that larger cultural conflicts disrupting integration within a group resulted in poorer health, mental and physical, for the more rapidly changing culture representatives (10). This position was expanded in the framework of personality theory, in 1956, to include the nature of the culture, that is, its roles and role-conflicts in the setting of the pace and type of acculturation which existed. (Compare items, 10.) Just as *depth* of affect, a function of the quality of defenses, may govern the *quantity* of interactions or communications, so the experiences of early learning, affecting this depth, may influence the individual rates of response, in one direction or another. This formula states, in effect, that family experiences are crucial in determining what Chapple designated as normative interaction levels. Genuine group experiences, in 5-8-person groups, are apparently maturing or socializing in this sense since they provide the setting for normative levels to emerge while providing, even more than in individual therapy, the various parental, sibling and child surrogate figures which so often appear in such milieus. Consequently, when properly organized, they raise interaction rates on the average. It is presumed, when such symbolic substitutions for family figures are made, or when transference and countertransference phenomena occur with greater rapidity, that an advantage is gained by such symbolic introductions of family figures and amnesic experiences. No doubt, this is not only because quantitative rates are increased, but because *depth* and emotional *valence* or *style* are more involved. In the author's terminology, one is introducing the *wider context* and its *bind-*

ing conditions into the stage of affective recognition by inducing the patterned family and social influences (11).

These patterned family and social influences, to the extent they are acquired or transmitted by symbols and express roles, are by definition cultural. Since value orientations and motivational structures meet at this point, depth and style likewise converge. In dealing with symbolic, culturally influenced roles, psychiatry will do well to recognize that such behavior depends upon patterns larger than specific family contexts, but are ingrained and reinterpreted chiefly through family settings. The psychic economy requires some perceptual, affective and cognitive classification and denotation of experiences, much as kinship system, language structure, or ethical and valuational methods in a culture provide the simplifications that allow us to read the social and cultural map. Thus the individual products of any social and cultural influences are not coterminous with the adjustments found in society and culture generally, and we may speak of the uniqueness of an individual or the variance within an illness process. The limits to individuality or even "normalcy" for that matter are set by common experiences in family and extra-familial settings. Because social roles are limited by life-course associations, speech patterns, or styles of emotional expression, they are undergirded by value systems, motivations and culturally determined stresses. In addition to depth of affect, we can ignore style of emotional expression and role-conflicts only at our peril in psychotherapy. Both influence quantity and depth of emotional communications. In short, the wider context of emotional valence and culturally determined roles influences the depth and quantity aspects of psychopathology.

Because of space limitations, only two examples may be given. A Puerto Rican psychiatrist, Torres-Aguilar, reports his observation of relatively high prevalence of catatonic outbursts of a hostile and aggressive sort in schizophrenics of lower class background. Schizophrenics with paranoid reaction, centered in confused sexual identity, are likewise typical and the paranoid elements are freely

expressed. In the neurotic categories, classical hysterical conversions, attacks of fainting more commonly for women, and freely expressed hypochondriachal complaints seem more marked in urban Puerto Ricans of the island than in most modern cultures. Today, such traits are seldom emphasized in reports from other urban scenes. Our observations on Puerto Ricans on the mainland, first generation, run strictly parallel. In fact, all norms of emotional expression and display of affect are more noted among these people. There is, as a cultural pattern, little inculcation of guarded affect, an emphasis upon *soma* and interest in sexual detail, great concern about health, and currently much disturbance occasioned by a shifting, particularly in urban scenes, of the social and economic role positions of the two sexes. Dr. Torres' (15) and our own observations run parallel on finer details than can be given here.

Similarly, the author studied South Italian and Irish schizophrenics of 3 generations. The Italian migrants and their descendants appeared to have a larger proportion of patients having catatonic outbursts of the hostile and destructive sort, while the classical reactions of paranoid type were found in the Irish patients, varying considerably from Puerto Ricans in guardedness, for one feature. All had the "official diagnosis" of schizophrenia, but the differences were vast indeed. In discussions with such patients singly, or even in group situations on the ward, it was helpful to anticipate such variations in emotional patterns and discuss them with the patient on neutral grounds of cultural affiliation. Viewing quantity, depth and style of emotional communications as an integrated balance of personality, one avoids a moralizing, condemnatory or judgmental tone in favor of satisfying discussions of social and cultural roles. The neutral grounds of cultural interest and affiliation provide the wider context of family background and individual experience. Elsewhere, we have called this method of inducing the wider context as the initial step, "cultural push therapy" (10).

In our experience, cultural reference al-

lows for a more delicate processing and ventilation of experiences in therapy. The neutral grounds of cultural interest provide more motivation for achieving perspective on social role positions. Any relationships, going in a series from man to fellow-man (social relations), man to family, and finally degrees of self-awareness, figure in cultural discussions. Even man-to-nature relationships are relevant. Ordinary guide lines of cultural experience give perspective and provide the same life-course phenomena and family roles that are the typical interest of patient and therapist alike. The therapist's acceptance of a person's culture is therefore the first step in his understanding of the family and the individual. For the patient, similarly, self-esteem and self-awareness may well depend on the rapport set up in such interchanges of cultural meanings and implications. In the studies of schizophrenics, Italian and Irish, alluded to above (12, 13), the entire structure of the illness and of current defensive balances depended upon the emotional valences built up in a sub-cultural setting and in a family over time. Quantity and depth of emotional communications varied notoriously with the course of illness, but style of emotional expression, far more crucial, varied with the culture and the role conflicts introduced between generations.

In group psychotherapy, there is opportunity *par excellence* to build up cultural awareness and respected identities. These, in turn, represent a gain, or the occasion, for developing individual perspective on self-images, and empathy for the products of others' lives. For the therapist, who must guide the total process, an awareness of the differing family structures and role conflicts of various cultures and subcultures will provide a key to emotional valences of persons coming from various backgrounds.

Apart from quantity of human interaction, the varying depths and styles of emotional expression point directly to typical roles, which need better understanding and depiction, since these roles, in turn, represent the sorting into modes of action of values, aspirations, motivations and typical stresses. The firm texture underlying conduct is far from biological need alone. Until such keys to behavior, normative and aberrant, are used, we cannot enter into a world of meanings which are otherwise only the sealed-in aberrations of troubled minds.

BIBLIOGRAPHY

1. Bales, R. F. *Interaction Process Analysis*. Cambridge: Addison-Wesley, 1950.
2. Borgatta, E. F., and Bales, R. F. *Sociometry*, 16: 302, 1953.
3. Chapple, E. D. *Gen. Psycholog. Monog.*, 22: 3, 1940.
4. Dreikurs, R. *Group Psychother.*, 9: 115, 1956.
5. Hare, A. P., Borgatta, E. F., and Bales, R. F. *Small Groups: Studies in Social Interaction*. New York: Knopf, 1955.
6. Keller, J. E. *Am. Sociol. Rev.*, 16: 842, 1951.
7. Lowie, R. H. *Social Organization*. New York: Rinehart, 1948.
8. Miller, G. A. *Psycholog. Rev.*, 63: 81, 1956.
9. Murdock, G. P. *Social Structure*. New York: Macmillan, 1949.
10. Compare: Opler, M. K. *Culture, Psychiatry and Human Values*. Springfield, Ill.: C. C. Thomas, 1956; and Opler, M. K. *The Southern Ute of Colorado pub. in Acculturation in Seven American Indian Tribes*. R. Linton. New York: Appleton-Century-Crofts, 1940.
11. Opler, M. K. *Group Psychother.*, 9: 290, 1956.
12. Opler, M. K. *Internat. J. Soc. Psychiat.*, 2: 11, 1956.
13. Singer, J. L., and Opler, M. K. *J. Abn. Soc. Psychol.*, 53: 42, 1956.
14. Compare: Pratt, J. H. *J. Am. Med. Ass.*, 49: 1607; Lazell, E. W.: *Psychoanal. Rev.*, 8, 1921; Marsh, L. C. *Ment. Hyg.*, 15, 1931; and A. Adler. *Guiding the Child*. New York: Greenberg, 1941.
15. Torrec-Aguilar, M. *Personal communication*.

NORMAL DEVIATIONS FROM REALITY

CLAUDE C. BOWMAN, PH. D.¹

"Reality" is a very ambiguous term, one that immediately raises a host of issues. Gregory Bateson has contributed to clarification here by outlining 5 definitions that can be found in psychiatric thinking(1). In one sense the word denotes the external world as perceived by the senses. This definition contrasts reality to fantasy and projection, but the term is often used in a contrary manner to denote the very subjectivity that is rejected by the first definition, reality referring to the individual's private world. A third definition involves awareness of one's idiosyncratic views and an ability to transcend these individual peculiarities in the interest of greater accuracy and effectiveness. Fourthly, the word appears in the phrase "the reality principle" which is commonly contrasted with the "pleasure principle," thereby suggesting that reality is unpleasant. Finally, reality is often contrasted with phenomena of magic. In this sense it is based upon the conceptions of science.

The relevance of these 5 definitions to the means and ends of psychotherapy is a complex subject that lies outside the competence of the sociologist. Here our purpose is to show that certain degrees of unreality, far from being a handicap to normal men and women, actually contribute to the maintenance of their morale. We shall maintain that the biases favorable to morale are not occasional deviations from normal thought and action but are in fact indigenous to culture and social living.

Now it is evident at once that a particular definition of reality is implicit in this statement of purpose. Let us be more explicit. In the discussion that follows a *sense of reality refers to conceptions of the social environment and of oneself which satisfy the highest standards of objective accuracy.* It may be noted that this definition touches upon the first, third and fifth definitions developed by Bateson. From our point of view realism stands in contrast to the conventional biases and illusions of man's social life.

¹Department of Sociology and Anthropology, Temple University, Philadelphia 22, Pa.

Immediately the question will be asked, "And who shall decide what is objectively accurate?" Are we not hopelessly caught in the toils of biases both subjective and collective? Actually the dilemma is less formidable than might seem to be the case at first glance. Once the fundamental value of special competence is granted, it becomes relatively easy to establish adequate standards in the complex task of determining reality. An assessment of sociological data and of opinions about these data can be undertaken by scientific experts whose knowledge and judgment tend to approach objectivity. Just as the psychiatrist possesses special competence in judging degrees of reality or unreality in the patient's mind, so the social scientist is equipped to determine not only the nature and extent of distortions in collective thought but also their social causes and effects.

The following examples represent common types of deviation from reality that can be found in American society today. Of course, it is not suggested that *everyone* exhibits these tendencies, but merely that the types of thinking described here are sufficiently common to warrant the attention of the sociologist

NATIONAL CULTURE

The concept "ethnocentrism" serves to emphasize the amount of unreality existing in all cultures. Each folk or nation tends to consider its ways as best and measures other cultures by its own yardstick. The achievements of the past, the rightness of current practices, the greatness of their destiny—such grandiose views are widely supported by the members of a given society. Informal and formal teaching by adults give sanction to the *mores* and this process of indoctrination is reinforced by habits formed in the daily round of activities. In a sense it may be said that, when one member lies—in an approved direction—the rest will swear to it. Thus, each culture generates and preserves a set of biases considered appropriate to its

ongoing life. The "strange," "irrational" or "immoral" ways of other people are viewed with amusement or alarm by the vast majority who, by these reactions, give emotional sanction to accepted patterns of living. Even in the most liberal cultures open-mindedness in regard to basic *mores* is sometimes tolerated but never actively encouraged. Australian aborigines, Japanese, Americans, and all other peoples are expected to follow the fundamental beliefs and values of their respective cultures.

Except during periods of upheaval and rapid change, deviations from cultural orthodoxy are not frequent enough to constitute a serious threat to group integrity and morale. The majority have little desire to run athwart the conventions but grow up to believe what they are supposed to believe. Some sacrifice of reality seems a small price to pay for social approval, especially since most people do not understand obscure issues of reality and unreality and, consequently, are wholly unaware of any "sacrifice." It is true that the more democratic nations do permit critical public discussion but even in these countries the distorting influence of patriotism is quite evident.

The following illustrations bear upon this point. We in the United States want to believe in the essential soundness of our family system, business institutions, schools, system of government, and our other institutions. Out of this patriotic faith the citizen builds loyalty and morale for peace-time pursuits as well as for times of war. It has come as a shock to many to learn that the "backward" people of Asia believe that they are just as important as the United States of America. In our naive way we tend to think that everywhere the world over accepts the goodness and greatness of our country as a permanent feature of the universe. We firmly believe that our actions are ever rooted in high moral principles and feel hurt or irritated when our policies are examined by other countries for dollar diplomacy. Moreover, when certain powerful leaders of Asia prefer to avoid clear-cut alignment with our side in the cold war, we tend to react with adverse criticism, if not open denunciation. In such ways patriotism may preclude an adequate apprecia-

tion of the problems of Far-Eastern countries.

On the domestic front one of the most noteworthy examples of unreality is the refusal of the general public to face the grim possibilities of war. A naive observer, uninitiated in the processes of illusion-building, might surmise that the development of atom and hydrogen bombs, not to mention bacteriological warfare, would lead our nation to give this problem top priority. But what has been the situation during the post-war years? Civil defense gets small public attention and small public subsidy. Urban re-development proceeds largely on the basis of pre-atomic thinking, increasing congestion rather than encouraging wider dispersal of the population. And what of the private efforts of individual families? Conscientious parents, striving to establish a good home for their children, will look amazed when you ask whether they have made plans for protecting their families in the event that a major war should break out. It is just too horrible to think about.

This is conventionalized escapism, to be sure, but it is the present thesis that such deviations from reality are important to adjustment. What can the individual citizen do, in the face of technological progress and institutional lag, except to indulge in a certain amount of "ostrichism?" Somehow or other he must carry on his daily affairs as if such threats did not exist. Perhaps physicists and engineers are perfecting a bomb five hundred times more destructive than those dropped on Japan in 1945 but right now the baby must be fed, the boss is calling for that report, or a party is being planned. The maintenance of morale seems to require that we avert our gaze from the grim possibilities of destruction, and hope for the best.

It is clear that the optimistic spirit has pragmatic value for individuals and groups, signifying faith in purpose and expectations for success. Yet optimism operates as a defense mechanism, the optimist seeing only what he wants to see. Aspects of the total situation that do not fit his orientation are ignored or, if recognized dimly, pushed aside before they emerge into full consciousness. Those holding important administrative positions may expect subordinates to discol their

doubts. Others seek reassurances from family and friends. In numberless ways we support each other in rose-colored views of reality and express disapproval of those who try to puncture the illusions by which we live.

The origins of American optimism must be sought in history. This frame of mind developed readily in a new country, rich in natural resources, expanding industrially and agriculturally, growing in size and power as more and more young, ambitious immigrants came from Europe. An optimistic outlook was an essential ingredient of the enterprising spirit of the 19th century and many believe that it is just as essential today.

SPECIALIZATION

Some degree of distortion appears to be inherent in the outlook of the specialist; indeed, in folk humor, specialists of all kinds are belittled because of their biases and lack of common sense. Now the sociologist realizes that various institutions (economic, political, educational, religious, recreational, etc.) in modern society are characterized by an increasing proliferation of structure and function, leading to individual careers which are more and more specialized. Yet, in the midst of this growing division of labor, the individual tries to preserve a sense of his significance and worth. In some occupations, such as routine tasks of a large factory, it is difficult to do this; but even in careers of higher status there is a constant struggle to preserve a sense of personal significance. In this effort a full and steady sense of reality may be a distinct handicap.

The academic profession may be used as an illustration. As subject-matter in various fields of knowledge has broken down into more specialties, scholars tend to concentrate upon knowing more and more about less and less. Under these circumstances it is easy, and perhaps necessary, to over-value the particular segments of knowledge where one's own proficiency lies. Such over-valuation seems integral to professional adjustment in the academic world as it exists. He who plays the game according to the rules is likely to gain promotions, offers from other institutions, an impressive list of publications, and other advantages. College presidents may deliver stirring addresses criticizing the narrow

specialist, and a few professors, particularly in obscure colleges, may resist the trend but these instances have little effect upon major tendencies in the academic profession. (In a few universities the embryonic professor can now take broader graduate programs in the social sciences or humanities but it remains to be seen whether this type of curriculum will have a significant impact upon Ph. D. education.)

It is the function of college administrators to construct a broad overview of institutional purposes. Insofar as administrators fulfill this function, they do bring a more realistic perspective to bear upon major decisions, decisions compounded of many ingredients contributed by various specialties both within and without the institution. Yet it cannot be assumed that top administrators are consistent realists. The ego feelings of these leaders are likely to be deeply involved in their organization. Such persons look upon the enterprise as peculiarly theirs; its successes and failures are felt more keenly, its good name is related to personal pride, and faith in the institution is an extension of the leader's faith in himself. Thus, the typical college president wants to believe that the collegiate *status quo* is essentially sound. "Our college is doing an excellent job, the faculty is capable and contented, the students eager and appreciative," he tells himself optimistically. Like other practical men of affairs he accepts the reality principle only so far as it is practical to do so.

Higher education has been used as an illustration but the same processes are evident in other fields. Within the professions there are at least 3 conditions leading to occupational bias. 1. A long period of preparatory education, involving time, effort, and money, leads the professional person to place a high valuation upon his achieved proficiency. 2. Colleagues in the same field tend to support each other's evaluations and rationalizations. 3. Professional organizations also contribute to morale by holding conferences and performing various rituals designed to give further sanction to group purposes. If, out of this multilateral process of indoctrination, the individual begins to magnify the importance of his chosen career, it should occasion little surprise.

Bureau Ednl. & Soc. Research
 LAURENCE H. BOWMAN
 Dated

SOCIAL CLASS

A common illusion is that there are no social classes in the United States. Many like to think that one person is just as good as another in this democracy where "all men are created equal." Now it is true that social stratification in this country does not consist of historically fixed categories sharply separated from one another by insurmountable barriers; instead, we have an "open class" system. Nevertheless the factor of status is very important in social relations. Groups on a vertical scale show relative differences in manners, morals, material comforts, occupations, residences, and civic participation from those of a higher or lower status. For this reason we may properly speak of class sub-cultures.

People of various social levels tend to develop and defend an outlook on life that is functionally appropriate to their particular position. Some in the highest strata hold to the complacent opinion that the cream of society inevitably rises to the top, ignoring completely such influences as family background and inherited wealth. That broad segment of society known as the middle class commonly considers itself to be the salt of the earth. These people assume that all "sensible" folks think as they do about politics, careers, family life or education. The lowest strata also have their special ideological slants. The rich and powerful are "lucky," the poor "unlucky." Some will even assert that the higher classes operate on a lower moral plane while they are "poor but honest." To be sure, such face-saving rationalizations may contain elements of validity—but elements of unreality too.

Since the class-bound person seldom carries on extensive communication with those of a higher or lower status and since most of his associates are also class-bound, he finds it easy to retain these parochial views. In this way certain distortions are supported by the various classes—with favorable effects upon morale.

MINORITIES

Racial and national minorities may also show a reluctance to face reality. An ambitious Negro may insist upon believing that

"there is plenty of room at the top," minimizing the handicap of prejudice. And why not? Assuredly it is not practical for him to dwell upon such handicaps. Similarly, Jewish men and women sometimes wear blinders so that they will not see anti-semitism. Indeed, some are sharply critical of other Jews who insist upon taking notice of prejudice. Again, in the interest of morale, why look unpleasant reality squarely in the face?

LOVE AND FRIENDSHIP

Through the ages it has been said that love is blind. Today it is fashionable among family sociologists to decry romantic illusions and urge a more realistic point of view. To some extent the new realism is salutary, for it represents the substitution of informed intelligence for traditional ignorance and mysticism. Yet the dynamics of teachers and textbook writers who criticize romanticism will bear further scrutiny. Perhaps the disillusionments of middle age are involved here. Also, a puritanical value system may lead such persons to emphasize the gospel of work and, correspondingly, to distrust those pleasures that detract from the serious business of "getting ahead."

From whatever sources it arises, this "realism" fails to understand that, in heterosexual love, the reality principle is at times "more honored in the breach than in observance." The dependent person, seeking security in the love of another, may magnify the other's strength and dependability because of this inner need. Other idealizations may concern beauty or achievement or ethics. These elements of unreality are not necessarily harmful; in many instances they are distinctly advantageous to both persons.

Parental conceptions of children can be equally unrealistic. Parents often have exaggerated notions concerning the capacities and achievements of their children—as every teacher knows. Conventionally we come to expect a certain amount of illusion on the part of parents, and even view it sympathetically. Of course, there will be disappointments when such conceptions depart too far from reality but, within limits, sentimental biases constitute a bond of cohesion in family life.

On a lower plane of emotional attachment the same principle is evident in friendships. We tend to be somewhat unrealistic about good friends, thinking the best of them and criticizing those who criticize them. Perhaps many of us play politics where friends are concerned; we recommend them for positions because we like them and not because they are, in the cold light of reason, the best qualified. Such biases are given open approval in a culture that stresses the value of friendliness.

At the same time friends are expected to contribute to one's own morale by praising achievements and minimizing failures. In this way favorable self-conceptions are maintained and the harsh impact of reality softened. Thus, it may be said that a person's friends are part of a pleasant conspiracy to keep him in good spirits.

SELF-CONCEPTIONS

This leads to a final word about self-attitudes and mental health. According to the definition given earlier, realistic appraisals of one's self are based upon objective assessment of a whole range of relevant factors. On the other hand, the maintenance of morale may require some degree of emphasis upon ego-gratifying factors in the total situation of the person and a minimizing of ego-

deflating factors. Such selections and rejections are made continually by the healthy-minded individual. Unconsciously perhaps, he gives goals of happy, effective living priority over the demands of strict logic.

It may also be asked to what extent these morale-building biases are encouraged in the course of psychotherapy. This is a complex question with many ramifications and, in all probability, different kinds of therapists would give different answers here.

SUMMARY

The foregoing discussion is concerned with normal deviations from reality in contemporary social life and the useful purposes which these serve. The author is not in agreement with those who believe that good mental health must be based upon realistic conceptions of environment and self. It is the present theory that individuals and groups normally develop biases consistent with their standards and purposes. This tendency involves elements of unreality but it favors mental health and high morale in society.

BIBLIOGRAPHY

1. Ruesch, J.; and Bateson, G. *Communication: The Social Matrix of Psychiatry*. New York: W. W. Norton, 1951.

RELATIONSHIP BETWEEN SOCIAL ATTITUDES TOWARD AGING AND THE DELINQUENCIES OF YOUTH¹

MAURICE E. LINDEN, M.D.²

INTRODUCTION

It must be stated at the outset that in effect this paper adds another imponderable to already extensive lists of factors contributing to youthful misbehavior. It is to be hoped however that it will not be classified in that group to which Edwin J. Lukas(1) refers when he states, "Each so-called 'preventive' enterprise has its own concept of causation to which it adheres with a tenacity which would evoke more admiration if the concept were more valid."

At the risk of oversimplifying a serious and complicated field of inquiry the writer is emboldened by a group of observations having a uniformity that urgently suggests they may well be facts:

1. Certain social changes predominantly in western societies have taken place during recent decades which constitute a shift in emphasis toward children's needs, resulting in the 20th century's often being referred to as "The Century of the Child"(2).

2. Concomitant with unprecedented population increases in the late mature categories there is abundant evidence of increasing dependency by the elderly upon public institutions, often associated with diminishing acceptance of family responsibilities toward the elders. A factor of elder-rejection plays a prominent role in such transfer of obligation (3).

3. Psychiatric clinicians have noted a widespread fundamental change in the clinical picture of the neurosis, with diminishing numbers of the classic neuroses but an overwhelming increase in character disturbances in which "personality" and "symptom" are practically indistinguishable(4).

4. Increased attention in Western culture during recent years has been drawn to the problem of youthful misbehavior. The Di-

rector of the F. B. I. in the United States has issued a public statement to the effect that there has been a definite increase in juvenile delinquency rate disproportionate to population growth.

5. There is fair evidence that countries and ethnic groups having a low juvenile delinquency rate are those whose cultural atmosphere reflects veneration and, or at least, acceptance of the aging and the aged. Agreement is general among sociologists and anthropologists(5) that elder-veneration, tradition-boundness, and a low rate of youthful delinquency are frequent concomitants.

The present thesis suggests that the foregoing social findings are mutually interrelated in a psycho-social equation; that a cultural factor of elder-esteem or elder-discard enters intimately into character formation in the development of personality; that the characterological attributes having to do with attitudes toward the aging are decisively linked to value systems governing moral and ethical principles and conformity; that devaluation and discard of the late mature generations are real social hazards potentially damaging to children; that the absence or distortion of a concept of social authority in which the status of the elder plays a significant role contributes importantly to a widespread looseness, waywardness, and rebelliousness of youthful behavior; and that without losing any recent social gains it is possible to influence favorably some aspects of the character formation of youth by restoring to the process of aging a connotation of authority and an implication of social reward.

THE CENTURY OF THE CHILD

Today the long overlooked needs of children have begun to receive attention. What is often forgotten, however, is the tendency of human nature to overcompensate for its defects, and to concentrate with almost fanatic enthusiasm on newly uncovered areas

¹ Presented at the First Pan-American Congress on Gerontology, Mexico City, September 18, 1950.

² Director, Div. of Mental Health, City Hall Annex, Philadelphia 7, Pa.

of social omission. The unfortunate consequence is the impoverishment and neglect of other sectors of social endeavor.

There is abundant evidence that the qualities of youth are the preponderant social goals. Note the prevalent anxiety regarding chronological age. Witness the omnipresent emphasis on newness, sleekness, freshness, mobility and change. But, in particular, observe the everyday tragedy of people moving blindly toward the later years with their inner vision arrested deceptively upon a fond mirage of the irrecoverable past.

Mankind hardly deserves any kudos for protecting and guiding its own helpless developing neophytes. Such are the functions of inherent biological drives. But the severe test of a civilization is found in its capacity to advance beyond the simply biological, and to create systems of group living in which personal welfare and meaningful existence are every participant's birthright.

We cannot escape the present reality in which the qualities of the young side of life are upgraded.

ELDER-REJECTION

Today more people remain healthy, live longer, and reach later maturity than ever before in history. The implication of social progress is tempered by certain other parallel disturbing facts: the tremendous number of older people for whom admission is sought in mental institutions; the mushrooming nursing home enterprise; the immense proportion of elderly on public assistance rolls; the widespread absence of social and recreational provisions for older folks; the marked increase in hospital occupancy by the chronically ill; the large numbers of solitary and bewildered aged existing in substandard living conditions, passing time aimlessly awaiting the end.

Certain exigencies of urban living plus a deep psychological predisposition to regard aging as unattractive(6) have forced ever greater numbers of families to relinquish a time-honored responsibility and divest themselves of the duty to care for their older members. The closing decades of the century may mark the *Era of the Nursing Home*.

That the windup of a life in the segregated quarters of some types of institution constitutes an empty and uninspiring goal can hardly be questioned. And there is logical foundation for the conclusion that all forms of social and psychological rejection of the elders are incorporated in the self-concept of the aging and eventuate in self-rejection that heralds personality regression and disorganization.

More important still are the effect of attitudes on the character development of oncoming generations.

CHARACTER DEVELOPMENT AND DISTORTION

The formerly common classic neuroses, such as hysteria, obsessional and compulsion neurosis, were based on rigid prohibitions, suppressions and extravagant punishments. It has been said(7) that "the inconsistency of the modern neurotic personality corresponds to the inconsistency of present day education. The change in the neuroses reflects the change in morality."

Character may be defined as an individual's habitual mode of responding to demands from various sources within and without the psyche(8). It is socially determined(9). The concept of character is closely analogous to the concept of "ego" as formulated in modern psychiatry. The ego has many functions, among them being the mediation among the demands of the instincts, the pressures of conscience and certain internal automatic repetitive tendencies. Even in greater measure the ego, or character, is called upon to integrate intimately into its structure the innumerable surrounding social stresses including the mores, ethics and group attitudes.

Uncomplicated observation suggests that the perpetuation of social and cultural values, the development and support of moral and ethical judgments, the evaluation and maintenance of the substance and resources of knowledge, as well as a related assortment of intellectual activities are the inherent functions of the mature mind. Man's concept of God and his ideal representation of the elder are the authorities for systems of discipline. They serve also as the source of power and impetus to effect a realization of social plan-

ning, to create and maintain systems and modes of social welfare, and to preserve the thread of philosophical continuity that runs through the basic principles of a civilization.

The development of an ideal social conscience in a child is consequent upon the success of psychological mechanisms through which he incorporates the best personal and social symbolic images available for identification. The inspirational goals that antecedents personify and the regard of the child for his elders figure significantly. The child also will absorb the inconsistencies, the unsolved problems, the prejudices and antipathies of his educators. As Johnson(10) has pointed out the child incorporates into his character factors operating from the unconscious structures of the minds of his educators.

The maintenance of the parent and grandparent ideal as the source of wisdom, goodness and love, judiciously associated with adherence to principle is significant in the creation of an ideal social character in the child. The socially oriented structure of his character becomes weakened if there is need for rebellion against his educators. In most individuals rebellion against the elders represents a seeking after independence and personal expression. In an ideal society, regardless of individual rebellion, an aura of respect for the elder and elder authority would remain constant.

The social inconstancy of parental character, a cultural rejecting attitude toward older people and a generalized mitigation of their social authority are readily absorbed in the character formation of the developing child.

The older generations, by virtue of psychological and physiological aging processes, cannot long endure the pressures of downgrading and hostility to which they may be exposed and their diminishing resistance may progress toward social powerlessness. Such debasement of the elder in the role of and as the symbol of authority tends to diminish the meaningfulness of all social authority. Youngsters may then incorporate into their own character an attitude of regarding aging mainly as decline, decrepitude and loss of purpose. When this happens, the child may

establish himself in his own eyes as a potent and autonomous authority.

YOUTHFUL MISBEHAVIOR

The decline in parental influence which parallels the decline in social authority of the older generations is currently reflected in a widespread need for an increase in police authority. That is, wherever family control is weakened, society finds it necessary to increase public and impersonal methods of behavior control.

This is not the equivalent of judicious parental control. Policing agencies are generally regarded as restrictive and punitive, not as loving guidance and training agencies. The immature character finds the presumedly punitive agencies challenges for rebellious and hostile acts. Thus, what in ideal family life would be beneficently controlled rebellion, in the social setting becomes open conflict.

Since policing services are looked upon as law enforcement instruments the distorted character's behavior may tend to avoid only that which is illegal in order to remain clear of the law. Such technical conformity permits a great latitude for actions that are socially opprobrious but not strictly illegal, and nefarious and discourteous practices of all kinds become an increasing reality. There is real social danger and potential damage to children in a social setting that demerits the elders.

Impressionable youth lacking adequate older objects for consistent identification may develop an enormously exaggerated belief in their own capacity to destroy tradition. They may disregard the mores, flout ethics, and discard historically established qualities of discipline.

Statistical tabulation(11) of juvenile offenses reveals a high incidence of acts of furtiveness and stealth or incorrigibility and ungovernability. The minority of problems are in the area of passion or bold aggression.

An overdramatized and grandiose self-concept in the young contains the danger of contagion. The illusion of being "master" is communicable among the immature. It is a deception that may be basically responsible

for the revolutionary abolition of tradition by an entire social group and the acceptance, if even only temporarily, of a neo-devotion created on a substructure of personal aggrandizement, impulsiveness and hedonism.

ELDER VENERATION

A lack of leadership uniformity which seems intimately bound to degradation of the elders furnishes fuel for hot rebellion in younger persons whose drive toward unwise autonomy is thus reenforced. Within the family a set of attitudes is often created in the young as they observe the now hidden, now open, brutality practiced upon their grandparents by their parents. "As the child incorporates in himself the image of his parents as part of his internal organization he is absorbing among other things this very pattern of sadism against the senior elder. Thus is guaranteed the fact that the vicious cycle of elder rejection will remain unbroken generation after generation" (6).

Tradition-bound societies, some of which are exemplified in the ancient Chinese, Hebrew and Indian cultures, can boast of a low rate of juvenile delinquency. The common denominator in tradition-boundness is respect and veneration of the elders. A return to the "good old days" with increased irrational authority of the parents and elders, it is said, would help materially in reducing the psychological breakdown that eventuates in senility, as well as reducing the rate of youthful misbehavior. However, many social scientists and community leaders would decry any retrograde cultural change that would imply loss of any social gains enjoyed today.

Thus there is need for social planning so designed that the late mature generations are reassigned social recognition as well as the comforts and rewards to which human nature aspires.

Within the family the parents cannot relinquish their affectionate and responsible educative role without insidiously affecting the character formation of the young; and the foundation for good government and good citizenship is to be found in the proper structuring and functioning of each family.

If the hypothesis (12) is accepted, that

normal maturation into the later years means increasing altruism in the older mind, then it is possible to conceive of a society in which collective social authority is irrevocably linked with elder-veneration without the necessity for sociological retrogression. It is the very nature of benevolent elder authority to employ its power not to command and dominate, but to develop leadership among oncoming generations, and to serve as adviser, consultant and coworker.

CONCLUSION

In the awesome network of social forces that relate to character and behavior distortion the hypothetical factor herein presented concerns itself with but one thread, perhaps a guyline. There seems to be a commonsense logic in the viewpoint that degradation of the elder role-model of social authority is paralleled by an increase in arrogance and wilfulness in the young.

The fact remains that aging in our culture is generally unattractive and unrewarding. A newspaper supplement recently stated the case succinctly, "the world is made for youth and youth is the time for fun." Can we expect the young to make provident and prudent psychological preparations for the advancing years, when the later period is so often seen in threatening aspect.

Desirable character formation in the young requires that the group character of a culture present a social atmosphere of dignified elderhood in which symbolic authority is implicit, an authority enriched with warmth, humanism, and charity, yet firm in its leadership, independently motivated, and oriented around group principles.

Nature has endowed youth heavily with a capacity to achieve its own rewards. Aging needs social support. If the rewards of youth are to be wisely invested to insure that lives are well spent, then the elders must be reinstated in their time-honored position as brokers in experience and consultants in living.

BIBLIOGRAPHY

1. Lukas, Edwin: J. Nat'l Prob. Assn. Yearbook, 1946, p. 33.
2. *Ibid*, p. 105.

3. Linden, Maurice E.: Jewish Soc. Serv. Quarterly, 31: Fall 1954, p. 80.
4. Fenichel, Otto: The Psychoanalytic Theory of Neurosis, New York: W. W. Norton and Co., Inc., 1945, p. 461.
5. Bowman, Claude C.: Prof. of Sociology, Temple University, Philadelphia, Pa.—Personal Communication.
6. Linden, Maurice E.: Social Casework, Feb. 1956, p. 75.
7. Fenichel, Otto: *op cit.*, p. 464.
8. *Ibid*, p. 463.
9. Fromm, Erich: Am. Soc. Rev., 9: 380, Aug. 1944.
10. Johnson, Adelaide M.: Sanctions for Superego Lacunae of Adolescents. In Searchlights on Delinquency, Ed. K. R. Eissler, New York: Int. Univ. Press, 1955.
11. United Nations Report, *op. cit.*, p. 4.
12. Linden, Maurice E., and Courtney, Douglas: Am. J. Psychiat., 109: 903, June 1953.

AN ENGLISH VIEW OF AMERICAN PSYCHIATRY

MICHAEL SHEPHERD, D. M.^{1, 2}

"It has been difficult," said Dr. Whitehorn in his 1951 Presidential Address to The American Psychiatric Association, "for many European psychiatrists to understand the American situation(25)." He could not have meant to imply that they lack interest in the subject. On the contrary, during the present century the growth and influence of American psychiatry have so increased that to psychiatrists elsewhere a visit to North America has come to constitute an almost indispensable part of their post-graduate education. For financial rather than medical reasons it is unfortunately an experience which has been enjoyed by only a small minority, and without this opportunity the opinions of the European psychiatrist must depend on the conflicting reports of his more fortunate colleagues and on the torrent of American publications. Accustomed to a more centralised tradition of medical training and research, usually with the university clinic in the foreground, he is hard put to it to understand the many, diverse and possibly unfamiliar institutional forces—State supported institutes as well as university centres, federal agencies like the United States Public Health Services, voluntary organisations like the National Association for Mental Health, private hospitals and clinics and the great foundations—which influence the form and direction of American psychiatry to-day. Perhaps it is inevitable that many European psychiatrists, seeking for some uniformity amid seeming chaos, have tended to heed only the most clamant of many voices and have assumed, again in Dr. Whitehorn's words, that "... the psychoanalytic movement has captured American psychiatry."

Among the European schools of psychiatry that of Great Britain has a close traditional link with North America. Between the wars many of the most eminent British psychiatrists made their pilgrimage to the Henry Phipps Clinic, and Adolf Meyer handsomely

acknowledged the contribution of British to American psychiatry in the 14th Maudsley Lecture(20). Describing his impressions of North American psychiatry more than 25 years ago one British professor concluded that "... the future is more secure in America than in any other country(19)." More recently, however, there has been evidence of what another British professor has termed "differences ... of quantity and tempo" between the psychiatric developments in the two countries(17). Some of these differences have found clear and even sharp expression in publications from both sides of the Atlantic. Dr. Freyhan, however, in his recent sympathetic review of European psychiatry concludes that American psychiatrists are as likely as their European colleagues to be struck by the unfamiliarity of what they find on leaving home(12). Indeed, he goes so far as to stress Professor Bleuler's warning that a breakdown may occur in communication between psychiatrists on the two continents. Such a situation is unknown in other branches of medicine, and it cannot but be deplored. Dr. Freyhan's article also makes it evident that the best in European psychiatry is of interest to American physicians not only by virtue of its intrinsic quality but also because of the light it may reflect on domestic problems. Ample confirmation of his opinion was provided during the year which the author was privileged to spend as a Postgraduate Travelling Fellow in the United States,³ when many of these problems were frequently raised in discussion with American colleagues. The discussions proved invaluable for the purpose of clarifying many obscure aspects of American psychiatry; they also helped make possible the formulation of some general views about it. Incomplete as such views must be, they have been summarised here in the hope that one observer may have been able to see something of interest to the participants.

Many of the misunderstandings which

¹ The Maudsley Hospital, Denmark Hill, London, S. E. 5, England.

² Corresponding Fellow of the A.P.A.

³ Travelling Fellow of the British Postgraduate Medical Federation in the U.S.A., 1955-1956.

have arisen in other countries about American psychiatry spring from a failure to understand the social setting in which the subject is practised(15). It is widely recognised that the content as well as the form of psychiatric practice is moulded by environmental factors. This complex issue can be illustrated by reference to the distribution of psychiatrists working respectively in the public service and in private practice. In England psychiatry, as a branch of medicine, comes within the orbit of the National Health Service; the bulk of the working time of British psychiatric consultants is devoted to salaried service in hospitals or other public institutions and private practice must consequently assume less importance in the majority of cases(1, 21). The efforts of the British Ministry of Health to improve the quality of mental hospitals and to develop them as dynamic centres of community service have been dependent on a supply of well-trained and often highly qualified physicians; to them are due the more liberal use of voluntary legal status, the development of domiciliary consultations, and of out-patient clinics, the experiments with the "open door" and the "therapeutic community," and the emphasis on rehabilitation(7, 16, 18).

Medical care in the United States is organised very differently. Nearly 3,000 of the 7,500 recognised psychiatrists in 1951-52 listed private practice as their major activity(5). By 1954 Davidson has shown that the private practitioners for the first time outnumbered their colleagues in salaried positions; further, one-quarter of them were engaged exclusively in the practice of psychotherapy and were not considered to "... meet the traditional criteria of the practice of medicine(8)." (These figures, of course, take no account of the large number of non-medical psychotherapists practising in the United States, but they have very few counterparts in Great Britain.) It is thus apparent that proportionately fewer American psychiatrists are in salaried public service and their role and functions are correspondingly modified.

A trend of this nature has other implications. Since no form of medical education can be dissociated from the purpose to which it is being put, the organisation of psy-

atric practice patently exercises a profound influence on psychiatric training. At the present time it is difficult to avoid the impression that to a substantial number of young American psychiatrists several of the major professional incentives—public status, mode of living and financial reward—are associated far more with private practice than with hospital work. From years of experience with a residency training programme in Massachusetts, Barton and Yakovlev reported the "... reluctance of residents to accept even financially attractive appointments in the geographically isolated state hospitals and even in many of the training-wise self-contained institutions(4)." The specialist therefore understandably demands that much of the curriculum should be devoted to psychotherapy and psychodynamic theory. His relationship with his supervisor often constitutes the corner-stone of his instruction(23). Conversely, there is a distaste for the tracts of detailed knowledge dismissed as "descriptive psychiatry"; an antagonism to many of the facts and concepts associated with the study of heredity; a neglect of much biological investigation; and, as Kanner has so strikingly shown, in many centres a biased ignorance of the evolution and the historical roots of modern psychiatry(14).

To an English observer the problems and experiments in psychiatric education in America seem to be of cardinal importance. On the one hand he is impressed by the generous allowance of time afforded to psychiatric instruction in the undergraduate years and by the high status of the subject in many medical schools, even if he takes Professor von Baeyer's estimate of American psychiatry as "... Kommen unter den übrigen ärztlichen Disziplinen(24)," to be the comprehensible hyperbole of an admirer. Yet American views on the nature and purpose of psychiatric education are still conflicting and are sometimes uncompromisingly critical (26). The visitor is not entitled to pass judgment but he may legitimately ask whether the frame of reference which is most widely endorsed in many centres of training is broad enough to encourage the inter-disciplinary cooperation which is clearly needed for psychiatric progress. The dangers of a re-

stricted viewpoint have been illustrated in the past 3 years: the frosty reception given to the newly introduced "tranquillizing" drugs by psychiatrists with a bias against physical forms of treatment has been matched by the enthusiastic use made of the drugs by psychiatrists of a different persuasion(2). In many scientific fields work bearing on psychiatric problems has bombarded the clinical psychiatrist with data, theories and speculations, mined from the rich seams of the social and laboratory sciences, psychology, statistics and public health, to name only the more important. The contribution of the investigators in these fields constitutes the most hopeful and the most challenging feature on the American psychiatric scene: it demands continual assessment by clinical psychiatrists who are in danger of becoming passive, if receptive, junior partners in what should be a joint enterprise of collaboration. More is now demanded of the psychiatrist than a medical background, an administrative proficiency and a close acquaintance with one concept of individual psychopathology. "Research has become big business" according to the head of the Biological Sciences Division of the Office of Naval Research(22), and as very large sums of money become available, psychiatrists are being led or induced to assume a different role from that to which most of them have been accustomed.

Fortunately, there is no reason to believe that any single viewpoint can long dominate North American psychiatry. The 1956 centenary celebrations of Freud's birth demonstrated the high standing of psychoanalysis in the country but did not conceal the restless dissatisfaction which exists not only among the small number of avowed antagonists of the psychoanalytic movement(3) but also among its proponents. In Great Britain psychoanalysis has been in contact with, rather than a part of, academic psychiatry: its concepts have been transmitted through a semi-permeable membrane of critical examination and testing, and the rate of absorption has been slow. In the U.S.A. a remarkable attempt has been made in many centres to ingest the whole system, python-like, into the body of academic opinion. The post-prandial reaction seems now to be leading towards the elimination of indigestible matter and waste

products: in evidence are the pronouncements of leading psychiatrists like Whitehorn and Appel; the new stress being laid on the psychotherapeutic method as a research tool; the supplementary investigations of the psychotherapeutic process itself; and the experimental testing of many psychodynamic hypotheses, though for much of this work the credit must go to psychology rather than to psychiatry(13). It seems highly probable that what is of lasting value in psychodynamic theory and practice will find its way into both British and American psychiatry; the difference lies in the tempo, and in the route which is being taken.

There is, however, only a partial view of American psychiatry to be obtained from contact with the medical and allied professions. Since the early days of the mental hygiene movement psychiatry has entered into the fabric of American life in a way unparalleled elsewhere and which finds expression to-day in the widespread quest for "mental health." No one interested in mental illness can disregard "mental health" which, although it eludes all attempts at definition, remains a live and vigorous concept. To the visitor it seems that "mental health" would become a less nebulous objective if three separate uses of the phrase were always distinguished. "Mental health" is employed first as a euphemism for mental illness, and may as easily screen an inquiry into schizophrenia as into schools. Secondly, and more legitimately, it designates the campaign for the viewpoint of those workers who apply skills developed in the field of public health to psychiatric problems; workers for "mental health" in this sense concentrate on the group rather than the individual as the unit of study, conducting morbidity and other surveys and paying close attention to the principles of epidemiology and statistics. But in its third guise "mental health" can be understood only by identifying what one authoritative subcommittee has termed "... the flavour of morals and ethics, religious fervour, personal investment, unvalidated psychological concepts, value judgments, psychiatric theory, political science, welfare movements, and cultism(11)." It is more likely to be the task of the social historian than of the psychiatrist to analyse the full

range of "mental health" activities in America today. Meanwhile the sociologists have begun to clear the way (9, 10, 26). Psychiatrists should follow their progress closely if they wish to grasp the social implications of their own activities.

The signs augur a phase of self-examination and reassessment in American psychiatry. It is to be hoped that the forthcoming report of the Joint Commission on Mental Illness and Mental Health will indicate the direction which is to be taken. Whatever that may be, it is certain to influence those of us who work in other countries and who will hope to profit from the achievements and even the mistakes which will ensue. Meanwhile the achievements of British psychiatry in recent years testify to the progress which has been made and illustrate the shaping of many advances by social factors. No psychiatrist concerned with the welfare of his subject in either country can surely doubt that a closer professional and personal interchange will result in mutual benefit.

BIBLIOGRAPHY

1. Abel-Smith, B., and Titmuss, R. M.: *The Cost of the National Health Service in England and Wales*. Cambridge University Press, p. 119, 1956.
2. Aldrich, K.: *Psychiatric Research Reports*, No. 4. Washington: Am. Psychiat. Assoc., 1956.
3. Bailey, P.: *Am. J. Psychiat.*, **113**:387, Nov. 1956.
4. Barton, W. E., and Yakolev, P. I.: *Am. J. Psychiat.*, **113**:66, July 1956.

5. Blain, D.: *Am. J. Psychiat.*, **109**:783, Apr. 1953.
6. Boshes, B.: *J.A.M.A.*, **161**:1213, July 1956.
7. Clark, D. H.: *Lancet*, **2**:1005, 1956.
8. Davidson, H. A.: *Am. J. Psychiat.*, **113**:41, July 1956.
9. Davis, K.: *Psychiatry*, **1**:55, 1938.
10. Eaton, J. W.: *Am. J. Psychiat.*, **108**:81, Aug. 1951.
11. *Evaluation in Mental Health*. Washington: U. S. Dept. of Health, Education and Welfare, 1955.
12. Freyhan, F. A.: *Am. J. Psychiat.*, **112**:673, Mar. 1956.
13. Harris, R. E.: *Clinical Methods: Psychotherapy*. In: *Annual Review of Psychology*, 1956.
14. Kanner, L.: *Bull. Hist. Med.*, **29**:329, July-Aug. 1955.
15. Knoepfel, H. K., and Redlich, F. C.: *Psyche*, **7**:67, 1952-1953.
16. Koltes, J. A.: *Am. J. Psychiat.*, **113**:250, Sept. 1956.
17. Lewis, A.: *Am. J. Psychiat.*, **110**:401, Dec. 1953.
18. Lewis, A.: *Rehabilitation Programmes in England*. In: *The Elements of a Community Mental Health Programme*. Milbank Memorial Fund, p. 196, 1956.
19. Mapother, E.: *Proc. Roy. Soc. Med.*, **23**:1197, 1930.
20. Meyer, A.: *J. Ment. Sci.*, **79**:435, 1933.
21. *National Health Service: Hospital and Specialist Services Statistics*. H.M.S.O., 1951.
22. Reid, R. D.: *Am. Scientist*, **41**:286, 1953.
23. Reiser, M. F., and Rosenbaum, M.: *Am. J. Psychiat.*, **110**:835, May 1954.
24. v. Baeyer, W.: *Nervenarzt*, **21**:2, 1950.
25. Whitehorn, J. C.: *Am. J. Psychiat.*, **108**:1, July 1951.
26. Wootton, B.: *The Twentieth Century*, **159**:433, 1956.

CORRECTION AND RETRIBUTION IN THE CRIMINAL LAW

LAWRENCE FRIEDMAN, M. D.¹

It is impossible not to sympathize with Dr. Richard Board's effort to establish a criterion of criminal responsibility devoid of moral judgement (*Am. J. Psychiat.*, 713:332, Oct. 1956). The approval which the article will doubtless compel from enlightened readers witnesses the shift of concern from judgement to correction that so regularly follows increased understanding. Different human interests make different uses of old institutions, and criminal jurisprudence is showing an undeniable tendency to regard itself as a doctor of society. In this role it will be assisted by Dr. Board's clarification of therapeutic rationale. However, psychiatrists have found by painful experience that advice is effective only to the degree that the advisor both understands the problem presented to him, and the perplexity from which it arises. It would seem that Dr. Board, in reflecting the new interest in correction, has permitted a certain relaxation of these requirements, and has overlooked considerations appropriate to his role both as psychiatrist and operational philosopher.

I

As a philosopher Dr. Board proposes that moral responsibility be discarded as a concern of the law because "moral responsibility [is] an idea having a metaphysical content dealing with free choice between the values of good and evil," whereas "the law constitutes an operation exclusively confined to the natural world of cause and effect." Though briefly stated and undefended, the first assertion is as controversial and unsettled as an assertion may be. It is familiar as the argument used by a group of critics to impeach the ethics of modern psychiatry. Psychiatrists, as good citizens, are wont to protest that the causal link between a person's actions and his total personality, far from excusing his behavior, is the prime requisite for attaching moral responsibility, which could not sensibly be attached to a freakish, spontaneous act totally unrelated to the personal-

ity(3). It is this fact to which Freud refers when he says "Obviously one must hold oneself responsible for the evil impulses in one's dreams. In what other way can one deal with them? Unless the content of the dream . . . is inspired by alien spirits, it is part of my own being"(1).

But if it is an error to regard moral responsibility as opposed to cause and effect, it is no less so to regard the law as "an operation exclusively confined to the natural world of cause and effect." For the law is not principally concerned with establishing what is and has been, nor in predicting what will be, but rather with the use of these in deciding what *should* be. Following the example of the law, Dr. Board himself steps outside the natural world of cause and effect and there finds that what is "worthy" of society is correction rather than condemnation and punishment.

This is a suggestion for which we should thank him if he recognized it as a suggestion. As the "operational meaning or 'cash value' of the concept (of criminal responsibility)" we are more likely to find ourselves somewhat suspiciously counting our change. For example, Dr. Board's operational analysis of criminal procedure reveals to him the workings of protective, corrective and humane principles, and something else which he calls "vengeance to the criminal." Although this last is apparently to be found in the operation of the law, it is not therefore, as you might expect, a part of its operational meaning. It is a "contaminant." This strange qualification of an operational concept (in which the metaphysician will recognize the old "accidental attribute") is required because the investigator finds such aims "rejected as unworthy of society,"—rejected, evidently by Dr. Board, since they are retained as contaminants by society. Such an operational analysis, which includes the import of some operations and excludes the significance of others, resembles not so much operational philosophy as it does operative surgery. Post-operatively a contaminant is

¹ V.A. Hospital, West Haven, Conn.

all that remains to the criminal law of the concept of Justice which afforded it such satisfaction in better days. If we agree to this we must be convinced that talk of retribution and debts to society is a rare and uncharacteristic way of referring to criminal responsibility.

Radical surgery, of course, has its indications and Dr. Board is obviously more interested in finding a workable meaning of criminal responsibility than elucidating the common meaning. Accordingly he states that "while these [his own] value judgments may have metaphysical origins, carrying them out requires scientific rather than metaphysical conceptions." If there is no way of applying common concepts, they must be excised. But is there not a sense in which the law can be considered an operational definition of moral responsibility? The problem of workability only arises with recent attempts to make exceptions to what has in criminal law been an obviously retributive system (and which remained so long after it recognized insanity). It is a discomforting thought that the problem of how to be more discriminating in applying the concept of moral responsibility is here solved by eliminating the entire concept. One can almost sympathize with those who learn from this not to discriminate.

We have here one further example of the failure (well illustrated in modern philosophy) to distinguish between explication and legislation. Explication is the replacement of a vague and shadowy notion with a clearly defined concept that comes as close to it as a clear concept can come to a vague one. If that vague notion is sufficiently obscure and its import distasteful to the explicator, he will be overwhelmingly tempted, while concealed in the dark, tortuous alleys of confused meaning, to secretly assassinate the offending concept and sponsor forth some favorite imposter in its stead. Legislation is so much simpler than explication and can look so like it. But perhaps of all philosophers, it is the operationalist who should have the greatest patience with the vaguenesses of the law, for this at least is already a set of operational definitions and having anticipated, so to speak, the greatest part of the

analysis, may be permitted its gaucheries and inconsistencies; if it had none the operational philosopher would have no job. Part of this job is to determine by the uses of the law, why certain wrongs are exempt from the need for retribution. To say that all are exempt, as Dr. Board does, is to abandon explication for legislation.

II

But if, as philosopher, Dr. Board should have seen how intrinsic the notion of retribution is to the criminal law, as a psychiatrist he would be expected to recognize how retributive is the punishment demanded by the conscience of the people whose law, after all, it is.

When Dr. Board asks "Where in the range of psychodynamics does moral responsibility suddenly or gradually appear?," his rhetorical question exposes itself to an answer. To be sure, and this is his main contention, nowhere do condemnation or moral directives appear as statements of psychology, but they do certainly appear in statements of psychology, and it is in psychology that these moral directives first receive their meaning(2). This being so, the psychiatrist is in the very best position to appreciate those retributive, punitive requirements of the mentality that creates the law. To nevertheless ignore them in the created law is as much a disservice and as ultimately futile as to pretend that people's consciences can serve solely as a guide to better behavior and never as a source of remorse or indignation.

But not only will the wise psychiatrist thus confirm what the careful philosopher finds in his analysis of criminal law; he will have the additional advantage of anticipating the confusion and contradiction seen in its application. He duly points out the ambivalence and complexity of what his patients consider to be fairly simple attitudes. He should not be the last to recognize that an institution like the law is used to implement many social aims, any two of which would be entirely consistent and compatible only by the most extraordinary accident. As a psychiatrist it better not try to instruct the public in these divergences than to conceal them behind a false rationalization. The apparatus

of the law is used for marriage counseling, child-rearing, psychiatric steering, social change. It is also used to avenge injustice. Depending on the temper of the times some of these aims may eclipse others. Eclipsed aims however vanish no more readily than repressed ideas, and will not be exorcised by labeling them contaminants. To say that "punishment as a method of rehabilitation is given in the same educative spirit as in punishing a child" is to say that punishment is only rarely a method of rehabilitation. Witness the remarks of the magistrates who dispense the greatest quantity of justice in our culture.

The lesson to be learned from Dr. Board's interesting attempt to rationalize the law by heeding only its protective and corrective aims is that the search for the compound of conflicting interests served by the law cannot be impatiently replaced by a simpler reconstruction. Such a reconstruction is irrelevant to the need the law fills, which is to bring society's complicated aims to just that kind of expression demanded by their relative weights. Opinions based on an autistic law created by the expert will be properly held, in the apt words of Dr. Board's quoted opponent, not "responsive to the question the jury must answer."

The only fruitful method is to continue the difficult and frustrating attempt to follow out all the hints that the exercise of the law provides. If there is a difference between society's attitude to the child, where punishment is educative, and its attitude to the adult criminal, this is operational evidence that culpability in the law has some relation to psychological development, and it provides operational hints as to what qualifies moral guilt in the mentally ill criminal. Does an ego require a certain integration before guilt seems appropriately applied to it? In punishing are we interested in counterbalancing an action reflecting a wrong sense of values, and do we therefore require a minimum of apprehension of facts or reality testing in order to insure that the distortion is really one of values? Are we perhaps offended by only

certain kinds of wrong value pictures? Whatever the answers, we will not discard them for inconsistency, since we know beforehand that under certain circumstances we will exercise sympathy where we might indignation, and that people will sometimes be more concerned about therapy than justice.

SUMMARY AND CONCLUSIONS

Dr. Board's objectives can only tend toward a happier society. His failure to distinguish between suggestion and analysis prejudices his worthwhile objectives in the following ways:

1. It leaves him unarmed against the resistances of society which go unrecognized.

2. It compromises the effect of the psychiatrist's most potent weapons,—expert advice and education, by concealing them in a tendentious special plea for the values of the psychiatrist.

3. In the manner of so many current political positions, it blurs the meaning of society's conflicting values by insisting that they are perfectly realized in the tissue of compromises and violations that alone can give them expression.

4. Finally, one suspects that there will come a time when the psychiatrist, accustomed to the stationary ethical foundation he has artfully built and unprepared for the heaving sea of felt principles, will feel in himself the upsurge of the rejected "contaminant" and be overcome by a moral malaise without remedy.

BIBLIOGRAPHY

1. Freud, Sigmund. *Some Additional Notes upon Dream-Interpretation as a Whole*. Collected Papers, Vol. V. London: Hogarth Press, 1950.

2. Friedman, Lawrence. *Journal of Philosophy*, 53: 15, 1956.

3. Knight, Robert P. Determinism, "Freedom" and Psychotherapy. In *Psychoanalytic Psychiatry and Psychology: Clinical and Theoretical Papers*. The Austen Riggs Center, Vol. 1. Knight, R. P., and Friedman, C. eds. New York: International Universities Press, 1954.

REPLY TO DR. FRIEDMAN

RICHARD G. BOARD, M.D.

In my article, "An Operational Conception of Criminal Responsibility," I tried to be as specific and precise as I could so that any inconsistencies in logical development would be easy to spot. Dr. Friedman believes that he discerns such mistakes. I hope that my objections to his objections will reassure him that I am not unfamiliar with the issues he has raised.

To begin with, Dr. Friedman points out that I did not document my assertion that the concept of moral responsibility was a metaphysical rather than scientific idea. I didn't think it was necessary to prove it for several reasons. First, what moral responsibility is, or is not, was not a central issue in my article which was concerned with setting forth an alternative to that vague idea. Second, while the subject may still be disputed by system philosophers, I believe that it is no longer taken seriously in science. For example, in one of the very articles cited by Dr. Friedman, Dr. Robert Knight makes it abundantly clear that any concept involving free choice has no place in scientific theory.

Dr. Friedman's next objections result from his failure to differentiate between criminal law as a system of proscriptions about behavior and the procedure of applying this system in the courtroom. For he quotes me as saying "the law constitutes an operation exclusively confined to the natural world of cause and effect" whereas the statement was: "the administration of the law constitutes etc." However Moses got his commandments, he had to descend the mountain to administer them in the valleys of cause and effect. Replacing a metaphysical ritual in administering criminal law by a deterministic, scientific procedure does not involve throwing away the value judgments such as justice blueprinted in the laws to be administered.

In the midst of this confusion, Dr. Friedman introduces a quotation from Freud in order to show that moral responsibility has something to do with cause and effect. Please note that Freud uses the term responsible rather than morally responsible. What does responsible mean in this context? To clarify

this, let me translate the quotation into more precise language: "Obviously, a constellation of forces within the individual results in the 'evil' impulses in his dreams. What other forces can cause them? Unless the content of the dream . . . is inspired by alien spirits, the location of these forces causing the dream is within the dreaming individual." Perhaps also implied is this: "And so it is to this individual and these forces that we apply the forces of therapy." Now certainly this statement is naturalistic enough. With but slight modifications it could apply to almost any animate or inanimate event. In this sense, a landslide is responsible for obstructing traffic and a murderer is responsible for his victim's death. "Responsibility" is used as a way of referring to cause and effect linkage and to locate the forces involved within a certain individual. And it means no more. But this is not the moral responsibility of the courtroom nor the criminal responsibility founded on that concept. If it were, how could we find even the sickest dreamer "irresponsible." If this kind of courtroom responsibility indicates causal linkage between actions and the personality, who could ever be judged irresponsible? What causes the "freakish, spontaneous act totally unrelated to the personality"—an alien spirit? As scientists we would do well to drop the whole idea of responsibility. It isn't needed to get things done with everything in the universe except human behavior and it isn't needed to get things done with human behavior. In my article the quantitative operational concepts of deterrent efficiency and efficient punishability replace the confusing idea of criminal responsibility.

Dr. Friedman's concern that I may have introduced some value judgments of my own in pronouncing retributions or vengeance an unworthy contaminant in the judicial process seems to stem primarily from his failure to appreciate that there are 3 general levels involved in criminal law. First, there is the blueprint for behavior, the laws themselves. Second, there is the blueprint of how to administer the laws. Third, there is the administration of the law by the all too human

judge and jury. My paper concerned the second level, the blueprint of how to administer the law, explicating the current value systems involved and the logic of their application to the natural world of criminal behavior. Regarding the value judgments inherent in the blueprint for administration, my point was that they have gravitated away from retribution and toward correction. Such things as public hangings, floggings, cruelty toward the imprisoned and other food for vengeance are discouraged these days because of this change in values regarding the administration of the law. Retribution and vengeance toward the criminal still flourish, as Dr. Friedman points out, but only at the third level, the all too human performance in the courtroom. But they are continually hedged in and circumscribed by the blueprint of administration. I say all too human because the law and the blueprint for its administration seek to be better than any man—more impartial, less vengeful, etc. This is one reason we prefer a government of law rather than men and regulate the administration of law rather than trusting too much to the emotional vagaries of judge and jury. In regard to the trend in values characteristic of the blueprint for administering the law, the emotions of judge and jury, vengeful or otherwise, stand as contaminants in the judicial process of government by law. In view of the progress already achieved in circumscribing these contaminants, Dr. Friedman need not be too pessimistic about further improvements.

Next comes Dr. Friedman's assertion that I was too selective in my operational analysis of criminal procedure in conspicuously omitting vengeance toward the criminal. I have already indicated why this portion turns out to be a contaminant in regard to enlightened administrative blueprints. But Dr. Friedman's conception of operational analysis intrigues me. Unfortunately, there has been a trend toward broadening the concept of operational analysis since Bridgman first formulated it until it can cover almost anything. Thus it is becoming a favorite of philosophers. It is possible that Dr. Fried-

man, in his role of careful philosopher, has achieved the *reductio ad absurdum* for this trend. As I get it, he seems to feel that any vague idea can be operationally analysed—even the magical rituals of the primitive, I would suppose. But there are concepts that are operationally meaningless and in such cases there is no alternative but to legislate rather than explicate. I regard moral responsibility as just such a concept. The fact that an elaborate courtroom ritual exists whereby it is supposedly applied confers no more operational validity upon it than conceiving of golden mountains will make one rich. As I indicated explicitly in my article, I set out to redefine criminal responsibility and made no bones about the fact that I was not intending an operational analysis of moral responsibility. I don't think any is possible. Dr. Friedman need not fear that the concept of moral responsibility will be assassinated in "the dark, tortuous alleys of confused meaning." That is where it thrives.

Regarding correction *vs.* retribution as an aim of the law itself, I am reminded of Professor Stace's observations on the subject. The impositionist theory, personified by Moses obtaining the law from God, holds that laws are imposed on mankind from without. The immanent theory holds that laws are evolved by mankind. Science has tended to confirm the latter. The law is viewed as an institution evolved by societies to maintain themselves. As adaptive mechanisms the laws and even the idea of retribution are corrective mechanisms maintaining society. Like many corrective mechanisms, retributive law is as inefficient in the long run as a neurotic symptom.

Having been jumped so frequently between the roles of philosopher and psychiatrist in Dr. Friedman's paper, I would seek final asylum in his role of wise psychiatrist. He had some nice things to say about my article before the inevitable, "however," and this suggests to me that our agreement may be more extensive than our differences. In turn, I have had to be abrupt and unconstructive. I hope that both of our discussions will stimulate further study of my article.

SOME PSYCHIATRIC NOTES ON THE *ANDREA DORIA* DISASTER

PAUL FRIEDMAN, M.D.,¹ AND LOUIS LINN, M.D.²

On July 25, 1956, at 11:05 p.m., the Swedish liner *Stockholm* smashed into the starboard side of the Italian liner *Andrea Doria* a few miles off Nantucket Island, causing one of the worst disasters in maritime history. The authors were passengers on the Europe-bound *Ile de France* and spent approximately twelve hours, independently, interviewing and observing the survivors, the crew of the *Ile de France* who participated in the rescue operation, and the passengers aboard the *Ile de France*. It must be noted that the cause of the disaster was purely a matter of speculation at the time and there was no factual basis for establishing culpability for it. Subsequent inquiries succeeded in establishing the circumstances of the accident, and the authors are gratified that their observations can now be measured in terms of confirmed facts and thus assume more realistic value. For, as psychiatrists and psychoanalysts who happened to be on the spot, we were in a unique position to make immediate observations. Our data, carefully recorded after interviews with a large number of people, do not constitute a systematically scientific study of the experience, but may represent a modest contribution to the psychology of disasters.

THE STATE OF INITIAL PSYCHIC SHOCK

The emotional state of the survivors may be divided into two distinct phases: the state of initial psychic shock and the recovery phase. During the phase of initial shock the survivors acted as if they had been sedated. It is noteworthy that but a minimal quantity of sedative medication had to be administered during this time. Thus, it was as though nature provided a sedation mechanism which went into operation automatically in most cases. The survivors presented themselves for the most part as an amorphous

mass of people tending to act passively and compliantly. They displayed psychomotor retardation, flattening of affect, somnolence and, in some instances, amnesia for data of personal identification. They were nonchalant and easily suggestible.

Comment.—The attitude of helplessness and dependency identifies this condition as a state of emotional regression in which people who are normally capable of functioning on an emotionally mature, adult level become childlike in their feelings of personal inadequacy and in their tendency to overestimate the powers of those offering help and leadership. In their state of shock, the survivors of the *Andrea Doria* could be compared to the survivors of the concentration camps who were found to have developed a state of affective anesthesia as a defense against the dangers and anxieties to which they were continuously exposed (7, 8). As early as 1918, the same reaction pattern was observed by Jones (9) as well as by Ferenczi, Abraham and Simmel (2) in victims of war shock; and when Freud (5) spoke of a "protective barrier against stimuli" (*Reizschutz*) he actually defined a mechanism which is probably mediated by the ascending, activating reticular system which protects the central nervous system when exposed to stimuli of excessive intensity. Because of this protective mechanism the survivors of the *Andrea Doria*, at first, could not be approached or induced to talk.

THE PHASE OF RECOVERY

After their initial shock had worn off, it became possible to question the survivors. As a matter of fact it was usually unnecessary to ask questions, since so many of them had a great need to tell their story. And they did tell their story over and over again, to anyone who would lend a willing ear. Characteristically, they showed pressure of speech and an apparently compulsive need to tell the story again and again, with identical detail and emphasis.

¹ Associate Attending in Neuropsychiatry, Beth Israel Hospital, New York City.

² Associate Attending Psychiatrist, Mount Sinai Hospital, New York City.

Comment.—We were impressed with the similarity between these repetitive narratives and the repetitive dreams of the traumatic neurosis. Each represents a psychological reliving of the trauma, as part of an attempt to master an experience that had proved overwhelming.

PREJUDICES AND PARANOID ATTITUDES

We were struck by the frequency with which the survivors who spoke to us were angered. They expressed certainty that the accident was the fault of the *Andrea Doria*, even though the details of the catastrophe—such as the extent of the survivors' misery, the irreparable loss of the beautiful ship, the relatively intact state of the *Stockholm*—favored sympathy on behalf of the *Andrea Doria*. This prejudice was based on the *a priori* acceptance that Swedes are dependable, faultless sailors and people of impeccable integrity and reliability, while Italians on the other hand are childlike and irresponsible, tending to pursue their pleasures instead of their duties.

Comment.—It is interesting to remember at this point that during hearings investigating the causes of the *Titanic* disaster in 1912, the term "Italian" was freely used as a synonym for "coward." "There were various men passengers," declared Steward Crowe of the *Titanic* at the U.S. inquiry, "probably Italians, or some other foreign nationality other than English or American, who attempted to rush the boats." This contention, proven false, formed the basis for a successful libel suit against this officer. It is also somewhat ironic to recall that in his book on the *Titanic* disaster, *A Night to Remember*, published less than a year before the *Andrea Doria* catastrophe, Walter Lord (11) expressed the view that some of the prejudices of the age went down with the *Titanic*, notably the belief in the superiority of Anglo-Saxon courage. Such a notion was proved overoptimistic by opinions voiced aboard the *Ile de France*. The absolute necessity for finding a scapegoat, for locating somebody who was at fault, found an outlet once again in the paranoid projection of prejudice on the part of people on the *Ile de France*; not only demonstrating that stereotype thinking

is still prevalent, but dramatizing its capacity to dominate opinion during periods of crisis and its influence in distorting perception and judgment.

Such attitudes are familiar expressions of the quest for a scapegoat, a psychological device for turning aggression outward. It is part of the overall attempt to master an overwhelming trauma. The survivors' tendency to blame the *Andrea Doria* for their misery derived from their feeling of having been failed. They suffered a narcissistic injury which may be compared to the feelings of a child who finds that the strength of his father has turned out to be a fallacy. Let us not forget that the *Andrea Doria* had been considered unsinkable, which conveyed a great sense of security in her passengers; yet there they were having to abandon her and being abandoned by her, experiencing the inability of a parent to cope with disaster.

The facts are that the crew of the *Andrea Doria*, with the expected exceptions, acted with generosity and even heroism. It has been recorded by Cornelius Ryan (13) in an article for *Collier's* and by Walter Lord (12) in an article for *Life* how an Italian cabin-class waiter and several Italian crew members cooperated in trying to free the wife of a passenger from beneath a collapsed partition, spending five hours in the futile effort. Many other instances of helpfulness and altruism on the part of crew members are on record, leaving no basis for condemnation.

Expressions of prejudice were not confined to fixing the blame for the accident on the *Andrea Doria*, but also manifested themselves in the contempt voiced by some passengers on the *Ile de France* toward Italian immigrant survivors because of their uncontrolled demonstrations of despair. To some who expressed these feelings it was explained that patterns of emotional expression are culturally determined and that they vary, in a given national group, from one economic stratum to another. It was also indicated to them that the control of emotional expression under stress is not a reliable measure of courage and strength of character; furthermore, that from a psychiatric point of view the expression of one's true feelings, particularly during bereavement,

serves a useful adaptive function in the mental health of the individual.

Such opinions among *Ile de France* passengers thus were clearly based on paranoid projections of stereotyped prejudice, in contrast to the reactions of the rescued whose resentment toward the *Andrea Doria* stemmed from the violent destruction of their sense of security and dependence.

THE PROBLEM OF COMMUNICATIONS

The most frequently voiced charges were: that no announcement had been made about the nature and gravity of the accident, and that no concerted rescue effort was made.

Comment.—These have been answered by the fact that the first impact of the collision caused a power failure on the *Andrea Doria*, putting the public address system out of commission. Moreover, the ship rapidly developed a severe list which, coupled with oil slicks on the decks, made it imperative for each person to save himself from sliding into the sea. These circumstances also made it almost impossible to circulate information on foot. As a matter of fact, Italian crew members did make their way about on the sharply inclined decks, urging passengers to remain calm, and there was indeed very little panic.

LEADERSHIP

The foregoing facts compel a consideration of the problem of leadership in crises. Because of the conditions on the *Andrea Doria* just described, groups of people were largely immobilized and isolated; this created a necessity for each group to evolve its own leader. In several instances, priests and nuns stepped into the breach. By virtue of their training they were prepared to do so, just as the predominantly Italian Catholic immigrant group was prepared by training to accept their leadership. Primarily they participated in the practical problems of the rescue operation, only secondarily providing religious solace to those who asked for it. In other groups there were individuals not otherwise identifiable who likewise assumed leadership voluntarily.

Comment.—The willingness of some people to assume leadership of a group in dis-

aster situations has repeatedly been observed, and a systematic study of such individuals might help us to identify the qualities that make for leadership, enabling us to concentrate our civil disaster training on such persons. The existence of a corps of trained people endowed with qualities of leadership may make the difference between success and disaster in community emergencies. A leader who understands the psychological importance of identifying with a group, as a device for combatting feelings of individual helplessness and despair, will make use of techniques which promote positive group action. Not only is effective leadership the most important weapon in combatting mass hysteria, but, as stated by Sperling (14), mass hysteria as such can be defined as a failure of leadership. Whether a group reacts to a crisis with self-control and cooperation or with egotism and chaos depends almost entirely upon the quality of leadership, and the vital importance of developing able leaders is well illuminated by Freud's (6) statement in the *New Introductory Lectures on Psychoanalysis*: "A psychological group is a collection of individuals who have introduced the same person into their super-ego, and on the basis of common factor have identified themselves with one another in their ego."

CHILDREN IN DISASTERS

The application of the "women and children first" principle on the *Andrea Doria* resulted in some poignant and, in at least one case, tragic separations and isolations. It can be said that this principle, which prevails in our culture during catastrophes, frequently results in the isolation of children from their parents with possibly disastrous psychological consequences.

Comment.—This view finds ample support in the Freud-Burlingham (4) reports on *War and Children*. During the bombings of London in World War II it was repeatedly observed that children exposed to extremely violent bombing scenes, even those partly buried by debris, showed no particular signs of having been affected if they were in the care of a parent during such incidents. Bombed-out children would arrive at a shelter, in the middle of the night, showing no

undue disturbance when accompanied by parents or by familiar parent substitutes. Serious psychological disturbances were confined largely to children separated from their parents during such experiences. It was the main conclusion of the Freud-Burlingham reports that such disasters as war have comparatively little significance for children so long as they only threaten their lives or material comforts, but become enormously important the moment they break up family life and uproot the first emotional attachments of the child within the family group.

In another study of emotional reaction of children to disaster, Bloch, Silber and Perry (1) clearly established a post-disaster increase in dependency needs characterized by symptoms of regressive behavior. They observed that a greater need for belonging and a reaching out for others were typical disaster responses in children, but that such manifestations would tend to be arrested or at least alleviated by the presence of a parent during disaster situations.

These principles found a practical application during the Arab-Israeli war of 1948 when the Israelis adopted the practice of requiring one parent to remain with the children if the other were assigned to a hazardous mission, so as to minimize the likelihood of children becoming doubly orphaned. The authors are convinced that a modification of the "women and children first" rule by insistence that a parent accompany the child, even if the only parent available be the father, would represent a sound application of modern psychiatric insights.

OFFICIAL IDENTIFICATION LISTS

The lack of an official list of survivors contributed to the delay in the reunion of families separated during the disaster. As far as we could ascertain, such a list was not initiated with the rescued during their stay aboard the *Ile de France*; this and similar delays on other vessels and at collection centers may account for the fact that several days passed, in some instances, before families were reunited.

Comment.—Prompt establishment and publication of such identification lists is an important leadership device in combatting

panic and maintaining morale. This device serves a twofold purpose. First, it is reassuring to the bewildered survivor to be recognized as an individual, the mere recording of his name, address and next of kin helps to re-establish, in his mind, the intactness of his shattered ego. The instances of amnesia during the initial psychic shock phase, to which we referred above, tend to support this concept. Secondly, to expedite the reconstitution of broken family units is a matter of equal psychiatric importance for the isolated individual. A considerable number of passengers on the *Andrea Doria* were immigrants coming to the United States, for whom the catastrophe represented a complete loss of identity in both the physical and the psychological sense. For members of this group, the loss of their passports constituted the end of their individuality; in contrast to the tourists, for whom the loss of passports was merely a transitory predicament which failed to damage their identity: they could always return to their background, their money and their roots. But for the immigrant the passport symbolized not only his individual identity, but also his sense of belonging, and it is not surprising that to save it was of greater importance to him than the saving of physical property. Those who could save their passports managed to maintain their pride, even if they had lost all their material belongings; those who failed to save them became "stateless persons," temporarily at any rate, whose whole sense of belonging went down with the *Andrea Doria*. The publication of an identification list of survivors would have brought a great measure of relief to these people for whom the loss of a passport also meant a discontinuation of their body image, a psychic loss which would have been relieved by being included on such a list.

REACTIONS AMONG THE ILE DE FRANCE PASSENGERS

Many lay persons, in subsequent discussions of the *Andrea Doria* disaster, have remarked: "How depressing it must have been! It must have cast a pall over the rest of your trip." This attitude, which implies a deep identification with the victims, can be

summarily dismissed. To our knowledge, there were only a few passengers who became so depressed that they decided to interrupt their trip to Europe and return home when the *Ile de France* docked at New York. It was not difficult to ascertain that these people had been depressed prior to their departure and that their depression was merely reactivated by the events at sea. In general the impact of the catastrophe did not have as disruptive an influence as one might think.

Comment.—It must be remembered that most of the passengers on the *Ile de France* were asleep at the time of the collision. They were stupefied when, upon awakening, they found out what had taken place, and manifested rather a feeling of shame and of having been cheated of the experience. One of the authors vividly recalls his feelings of anger at not having been awakened and of deep disappointment when his services were not needed. The passengers somehow reminded one of soldiers during a war who have remained behind the front lines and never got to see a real battle. This usually generates a sense of guilt, which no doubt was also present in all the passengers who showed a readiness to help as much as they could and even displayed acts of generosity.

All this points to a confirmation of the principle that guilt can be a positive force of social good when given proper channels of expression in terms of morality and social approval; in the process, personal neurotic anxiety and depression may be relieved.

PERCEPTUAL DISTORTION

Several passengers on the *Ile de France* were awakened by the sound of lifeboats being lowered to pick up the *Andrea Doria* survivors and went back to sleep with the thought, "this is only a drill and is of no concern to me." One man expressed this aloud to his wife and got up, reluctantly, only at her insistence that drills do not take place at 2 a.m. A particularly fascinating experience was reported by a man who heard voices outside his cabin. He got up and saw several lifeboats in the water. The people in them wore the conspicuous orange-red life preservers, and in the brilliant spotlights of the ship these colored life preservers had, to

his mind, a festive quality. The sounds outside, which were actually expressions of misery, sounded to him like laughter and gaiety. It seemed, to quote him, "like a carnival in Venice." He went back to bed muttering to himself that this was carrying the Frenchman's love of fun a little too far and that one should not cavort so noisily in the middle of the night. He was just falling asleep when the true significance of what he had seen hit him, and he leaped from his bed and got dressed. Several others reported hearing sounds outside the portholes which they interpreted as sounds of festivities and merriment.

Comment.—In each of these cases we find perceptual distortions which parallel those taking place in sleep. Stimuli received during sleep are transformed into dreams that encourage the continuance of sleep. In our examples the subjects were already awake, but interpreted their sensory impressions in such a way as to justify a return to sleep; i.e., in a way designed to relieve anxiety which would disturb sleep. Instances of sensory distortions under similar disaster circumstances are described in Lord's (11) book on the *Titanic*:

Individual voices were lost in a steady, overwhelming clamor. To Fireman George Kemish, tugging at his oar in Boat 9, it sounded like a hundred thousand fans at a British football cup final. To Jack Thayer, lying on the keel of Boat B, it seemed like the high-pitched hum of locusts on a midsummer night in the woods back home in Pennsylvania.

PROPERTY

During the evacuation of the *Andrea Doria*, most passengers were forced to abandon their belongings. Such exigencies throw an illuminating light upon feelings toward property in disasters. What do people try to save under these circumstances? What do they choose to take with them in the process of trying to save their lives?

The main concern of the immigrant group was focused on the effort to save their passports, disregarding articles of material value. For members of this group, as we have noted, a saved passport meant the continuation of body image, the tangible affirmation of survival, the maintenance of their sense of belonging and pride. But of course, too,

the saving of valuables appeared to be secondary. In some instances, women already enjoying the safety of a lifeboat would drop their jewelry into the ocean.

Comment.—One might speculate about the sacrificial symbolism of such acts which imply the offering of sacrifice as an expression of gratitude for the sparing of life. The fact that a lady who had saved her mink stole became the object of ridicule would seem clearly related to such feelings. While behavior observed during the sinking of the *Titanic*, like our notes on the *Andrea Doria* catastrophe, revealed a rich variety of attitudes toward property, the former would equally tend to confirm the existence of a need to offer material sacrifice in exchange for life. The following examples are taken from records of the *Titanic* affair. One person took with her a musical toy pig, another a bible, another a revolver and a compass, another only books, another four oranges. Two outstanding instances were noted in Lord's book, both expressing a curious disregard for valuable belongings: one was the case of Mrs. Dickinson Bishop who, having left behind 11,000 dollars' worth of jewelry, sent her husband back to the cabin for her muff, the other, the famous decision of Major Arthur Peuchen to abandon 300,000 dollars in stocks and bonds and to take merely a good-luck pin and three oranges. Although there were others, like Mrs. Adolf Dyker, whose main concern was the saving of their jewelry, the outstanding feature of property rescue was the secondary importance attached to articles of monetary value. The authors found a striking parallel, in these reports, to incidents observed in the more recent disaster.

CLOTHING

In the course of leaving the *Andrea Doria*, most passengers had to shed their shoes and partially also their clothes. Thus they came aboard the *Ile de France* shoeless and, many of them, scantily clad. Crew and passengers of the rescue ship were generous in their contribution of clothing articles; yet it caught our attention that some of the survivors, mainly among the younger people, were not too eager to accept the garments

thus offered to them. But their attitude was in sharp contrast with that of the majority who felt deeply ashamed of being unprotected, when given of this opportunity their means of becoming dignified human beings again.

Comment.—These people looked upon clothing—as Flügel(3) observed in his brilliant exploration into the psychology of clothes—as protection against the unfriendliness, the enmity of the world as a whole, and as reassurance against the absence of love and security. Being in unfriendly surroundings—and to these people, who had to abandon the familiarity of their own ship, the chilly decks of the *Ile de France* must have appeared unfriendly—their natural tendency was to button up, to wrap garments around their bodies. They felt agreeably strengthened and supported by clothes in such circumstances.

It was interesting, therefore, to speculate on the motivations of those younger people who hesitated to accept the offers of clothing. One might ascribe to them, on the one hand, a feeling of bravado and assumed poses of heroism, possibly tending to exploit their situation in the hope of obtaining greater, more substantial rewards upon their arrival in New York, in the manner of a child who rejects a small toy while waiting for a bigger one. On the other hand, and perhaps more significantly, one might conjecture that they were also gratifying exhibitionistic fantasies; i.e., that they derived a narcissistic pleasure from the display of their bodies and that their lack of eagerness to accept clothes indicated a hesitation to sublimate it.

The behavior of both groups with regard to clothes, as well as the contrast between the two attitudes, provides a striking dramatization of Flügel's findings that articles of clothing are essentially in the nature of a compromise between conflicting elements for the establishment of harmony, in the same way as neurotic symptoms represent a compromise between conflicting and largely unconscious impulses.

SUMMARY AND CONCLUSIONS

We have presented observations concerning the phases of initial psychic shock and of recovery; prejudices and paranoid attitudes;

the problems of communications, of leadership and of children in disasters; the role of official identification lists; reactions among the *Ile de France* passengers; instances of perceptual distortion experienced by the latter; and various attitudes of the survivors toward personal property and toward clothing.

It is our hope that these observations will be of interest and possible value to those concerned with the psychological problems of civil disasters. The sinking of the *Titanic* in 1912 prompted major reforms and improvements in the physical aspects of safe navigation. Our psychological exploration of the *Andrea Doria* disaster, unsystematic though it be, points to avenues of further study into the following areas:

(a) Our notes on the role of prejudice in the development and resolution of crisis might merit the attention of the World Federation for Mental Health in its program for the prevention of social and individual emotional disorder through the systematic search for tension-reducing techniques. Our observations also emphasize the importance of paranoid reactions which are apt to arise in crises and to intensify conditions of chaos.

(b) The *Andrea Doria* experience points up the fallacy that all disaster training must be based on the expectation of nuclear warfare. Men of leadership caliber who shy away from preparations for atomic attack might participate more wholeheartedly in programs which emphasize training for such peacetime disasters as may befall anyone.

(c) The introduction of leadership devices that are based on established psychological needs. In our discussion of the "women and children first" principle we pointed out the desirability of having at least one parent accompany the child. The need for such practice has been amply demonstrated during previous crises in recent his-

tory. The importance of a speedy method of collecting and publishing survivor identification lists in disasters has also been established as a major device designed to aid survivors in maintaining their identity and to alleviate the traumatic content of their experiences.

The authors do not attempt to draw any general conclusions on human nature from the *Andrea Doria catastrophe*. But they do believe that the introduction of modern psychiatric principles in these areas will effect progress in important aspects of human welfare.

BIBLIOGRAPHY

1. Bloch, D. A., Silber, E., and Perry, S. E. *Am. J. Psychiat.*, 113: 416, Nov. 1956.
2. Ferenczi, S., Abraham, K., and Simmel, E. In *Psycho-Analysis and the War Neuroses*, pp. 5-43. London: International Psycho-Analytical Press, 1921.
3. Flügel, J. C. *The Psychology of Clothes*. London: Hogarth Press, 1930.
4. Freud, A., and Burlingham, D. T. *War and Children*. New York: Medical War Books, 1945.
5. Freud, S. *Beyond the Pleasure Principle*. London: International Psycho-Analytical Press, 1922.
6. Freud, S. *New Introductory Lectures on Psychoanalysis*. New York: W. W. Norton & Co., 1933.
7. Friedman, P. *Acta Medica Orientalia*, 7: 163, 1948.
8. Friedman, P. *Am. J. Psychiat.*, 105: 601, Feb. 1949.
9. Jones, E. In *Psycho-Analysis and the War Neuroses*, pp. 44-59. London: International Psycho-Analytical Press, 1921.
10. Linn, L. In *A Handbook of Hospital Psychiatry*, pp. 508-515. New York: International Universities Press, 1955.
11. Lord, W. *A Night to Remember*. New York: Henry Holt & Co., 1955.
12. Lord, W. *Rescue at Sea*. *Life*, Aug. 6, 1956.
13. Ryan, C. *Five Desperate Hours in Cabin 56*. *Collier's*, Sept. 23, 1956.
14. Spertling, O. E. In *Psychoanalysis and the Social Sciences*, 4: 83-93. New York: International Universities Press, 1955.

GROUP PSYCHOTHERAPY: INDIVIDUAL AND CULTURAL DYNAMICS IN A GROUP PROCESS

MARVIN K. OPLER, PH.D.¹

Group psychotherapy depends on the dynamics of three processes. These processes are interwoven. Simultaneously, they involve the group, the individual and his cultural background. To date, there has been relatively little attention paid to this interweaving of three basic elements, their relative weight or effects, and the influence of one upon another during treatment. Since group techniques are used constantly and increasingly in hospitals and in private practice, a systematic approach to the total process is required.

This account discusses relevant aspects of the total process in which each term, the group, the initiator of therapy (the psychiatrist), treated individuals, and a variety of cultural backgrounds all play a role. For purposes of analysis, these relevant aspects of the listing just given must be determined. We therefore discuss them in the order of (a) the group, (b) the individuals and (c) cultural backgrounds represented by the physician and the treated individuals. In so doing, we shall deal with affective constants and variables associated with the terms listed as if they represented a continuum ranging from more optimal emotional conditions to those involving greater disturbance. We therefore begin with the group.

While most group psychotherapy involves Freudian presuppositions, Freudian notions of a necessary procedure are often lost in the complexity of the group process. We shall regard Freud's voluminous writings on psychotherapeutic procedures as being in "the public domain" and shall purposely avoid a list of specific references. However, such various works as Freud's *Interpretation of Dreams* or his *Constructions in Analysis* readily come to mind as instances of the assertion that therapeutic interpretations are really reconstructions of the past. In *Constructions in Analysis*, for example,

it is stated clearly that only further steps in the analytic procedure enable the therapist to decide upon "correctness or uselessness" of such constructions. This operational procedure in psychoanalysis, which Freud stated was conjectural, awaiting "examination, confirmation, or rejection" really accords well with the operational and exploratory character of most group sessions. However, Freud paid little attention to concomitant group influences in treatment sessions. Even in the *Psychopathology of Everyday Life*, the impression one has is that two-person situations, rarely with a modest audience of onlookers, predominated. Many of these instances involved the individual and his errors of omission or commission, acting alone.

What, then, does the group—even a somewhat amorphous and experimental one—add to this picture? The last decade has seen great development of research interest in the organization and functioning of small groups. Hare, Borgatta and Bales have assembled much of this literature(5). From mountains of research, the flowers of information are rare, but they have definite uses, when catalogued, for group psychotherapy. In 1940, the anthropologist, Chapple, discovered all persons have characteristic or normative rates of communication, described as interaction levels. Experimentally, the rates showed modification by interaction constants of others in the same situation. For example, as politeness or shyness in strangers wore off as a function of time spent together, each approached their already noted, or normative, levels(3).

Psychiatrists add to this a crucial observation, namely that a mental illness may drastically modify such normative interaction levels of personal communication still further. Again to cite theoretical statements of this idea, already in the public domain, one could note that this particular observation formed a large part of Sullivan's *Interpersonal Theory of Psychiatry* or of Fromm-Reichman's *Principles of Intensive Psy-*

¹ Vis. professor of anthropology (social psychiatry), department of psychiatry, Cornell University Medical College, New York City.

chotherapy. Stanton and Schwartz's *The Mental Hospital* is a third well-known work replete with such instances. What is arresting about these three well-known works, taken together, is that they stress almost with increasing emphasis that the interpersonal theory of illness, or the interpretation of schizophrenia given by Fromm-Reichman, or the responses of patients to milieu reported by Stanton and Schwartz record the levels of personal communication as functions of both longstanding illness processes and more contemporaneous experiences. Although the parallel literature from group psychotherapy is too extensive and scattered to adduce here, group psychotherapists know that a particular "emotional climate" or discussion-sequence may modify individual and group interaction rates noticeably.

In the field of small group research, rate is the *quantity* or *amount* of human, symbolic interaction. We already know this quantity, as a total, is increased in the group process. However, besides the quantity or amount, there is the further question of the quality or depth of expression. In the three volumes mentioned, it is stated both theoretically and concretely that *quality* or *depth* of expressive communications may range from superficial to highly expressive symbolizations of subjective states. Small group research has often not troubled to make such distinctions as to content. Yet, in psychiatry, the quality or depth of the content of communications has been of overwhelming importance as soon as psychodynamics became a central focus of therapeutic procedures.

However, while amount or depth of communications has each been noted in psychotherapy, a third element seems to be involved if we are to deal with affective constants and variables associated with the terms we have listed. Both small group research, and considerations of the depth of expression, may easily overlook this third aspect. While the Freudian system suggests expressions in depth may be cathartic, increasing emphasis on ego structure has warned against an unbridled flooding of impulses. Much of this discussion has been couched in terms of transference and countertransference as if larger group relationships hardly existed.

The author, therefore, introduces as the third term the *emotional valence*, or *combining power* of an affective state, and of its verbal and non-verbal symbolizations. Here one thinks not simply of depth of emotion, but of characteristic style of affect. Polar examples might be hostile or cooperative utterances. But in reality, human behavior is so modified by symbolic constructs resident in cultures and in subcultures that no individual exposed to cultural backgrounds at all fails to incorporate emotional valences towards persons, objects and ideas. These are best called human *and* cultural values. Obviously, they relate to the social role expectancies and functioning of persons in a static or in a changing cultural scene. Equally, the social roles and statuses are themselves dynamic and multiple since they apply throughout the life-cycle.

To illustrate, in a scale, one who has participated in group sessions can discern the illness polarity in low rates of interaction as to quantity, depth or emotional valence. Actually, these aspects interblend or interpenetrate, affecting one another. For example, low rates of interaction may be mixed, or modified by, hostile non-verbal communications. As is known from studies of schizophrenics, the rate of interaction should not be confused with lack of reaction. Blocking, rigidity and withdrawal may all be defenses changing interaction rate. Similarly, on the levels of depth of expression, these impediments may be patterned or sharpened as habitual response to be denial, circumstantiality and only superficial contact with the tests and identifications of reality. Then, indeed, one is contrasting this lack of realistic spontaneity with forms of participation that are emphatically sincere and honest. Here we have been thinking of quantity and depth, respectively, in interaction processes. For the third term, emotional valence or style, the illness polarity may disclose, for example, generally antagonistic, resentful or revengeful modes of interpersonal expression as typical. **Quantity, depth and style (or emotional valence) are, taken together, indices of the dynamics of an illness, and without this methodological organization or specific type of recognition, they have already**

been utilized in successful individual or group psychotherapy.

In respect to the interrelations of these elements, we have already noted that quantity *increases*, in affective stimulus or response, mark both the normative and the therapy group. Why is this? First of all, the affective stimuli are increased by the presence of several persons, but in addition, Borgatta and Bales learned that an individual typically tends towards his maximum rate of participation, modified for each by respect for the participation of others(2). In such striving behavior, there may be attempts at mastery, coping or reward-seeking since Keller found experimentally that those who initiate more discussion usually have more remarks directed to themselves(6). One learned also by experiment that groups arranged in circular (democratic) and intimate face-to-face patterns, without intermediate dominating figures, had both more interaction and superior morale as a result, Bales adding to this that the optimal size is the 5-person group. Miller has noted in the same context of small group research as Bales(5) that there are limits to our natural capacity for processing information, and that 5 to 7 units mark limits for visual and tonal stimuli, beyond which, at 8 or more, errors are common. (Compare 1 and 8.) Like the "span of immediate memory" or digit span tests, 7 appears to be a common limit.

In anthropology, both Murdock(9) and Lowie(7) have noted the universality of the "nuclear family" of parents and children, with kinship systems beyond this unit ignoring, restricting or creating and expanding such natural bonds through terminological notations. The nuclear group terms, however used—and the systems are several in world history—seem to run parallel to what is learned as to optimal size of human small groups though the actual individuals noted may far exceed the denotative kinship calculus used to categorize them. These data on human social organizations corroborate Bales' experimental data on the "best" size for maximizing interaction, except that here social organizational realities require humans to apply denotative kinship terminologies to often vast groupings, like clan relatives,

which exceed common intellectual capacities.

In group psychotherapy, one is dealing neither with normative family structures nor kinship variations. Even the abstractions of normative group processes, their quantitative and interaction findings must be taken together with considerations of the depth and style of individual communications as affected by group process or milieu. Thus, depth and emotional valences become somewhat more germane than the quantitative matters just reviewed. As with kinship systems in culture, though there are quantitative parameters indicated by the human limits for processing information, the information itself must be processed in patterns that are both personally and socially meaningful to the individual, or they become lost items in the business of living. In the serious work of role-playing, we can only assume or interpret roles that have some symbolic meaning and significance. As participants in any settings, group-oriented or individually expressive, role-conflicts are bound to impede action, emotion or cognition where they proceed from a splitting of values, meanings and goals. Both neurotic conflicts in which the struggle for a meaningful integration is still going on, and psychotic splits in which roles are curiously divorced from realities express the resultant states, the balances and imbalances, achieved in the service of role conflicts.

Group psychotherapy, according to Dreikurs, developed "almost incidentally" within psychiatry as a form of treatment devised "primarily to save time for the overburdened practitioner(4)." This is true, but almost equally there was a sense of generic similarity in problems of role functioning of classes of patients. Pratt, designated by some as "the father of group psychotherapy," discerned near the turn of the century a common problem in lower class tubercular patients connected with the isolation and sense of secrecy and shame connected with this disease, and its recognition and management. Accordingly, he used the group technique to create hope and give patients instruction about the management of tuberculosis. In the mental hospital, both Lazell and Marsh suggested total push methods in application to

schizophrenia, creating awareness that psychotics received benefit or "revival" from social interests and responsibilities. Adler applied the method in a more preventive sense to teacher and parent groups, again social role categories. (Compare items under 14, Pratt to Adler.) There is no doubt that current group psychotherapy in mixed groups has moved from these basic considerations, but it is as concerned today with role-conflicts exhibited within individuals and in groups as it ever was.

Dreikurs, in the article alluded to above (4), claims the "First Psychiatric Revolution" occurred with the introduction of humane treatment in mental institutions. The "Second, or Psychoanalytic Revolution" may be designated in his fashion as stressing early development and family experience (our emphases, M.K.O) in an era of "accentuated individualism" during which the psychiatrist "moved into private practice" (Dreikurs). Whichever aspect one stresses, the role of the physician, or the tendency to extend the interpretation of human relationships in the light of the patient's experience in the family, the latter were, as Dreikurs has noted, explored chiefly through individual psychotherapy following the recognition of the dignity of the person. It is easy to underestimate the importance of the psychological development of the individual in a family setting. In terms of our own methodological organization, we may note that the current emphases on small group dynamics—the typical sociometric and quantitative approaches to interaction—equally underestimate roots of family settings in typical subcultures of our times. While the quantitative approach to interaction may recognize human limits and potentialities for communication, such discussions of human optimum capacities are abstract unless both family and cultural role conflicts are explored. It is no accident that while group psychotherapy left the door open for Freudian and Neo-Freudian experiments in the quality or depth of expressive communications, it said less about emotional valences or basic styles of affective role conflicts.

However, besides the individual and the

group, and the concerns respectively for depth of affect and quantity of interaction, there are the affective patterns or styles of emotional expression which are chiefly an outcome of cultural role conflicts. Anthropology has long recognized these, without systematization in any given theory of personality, under the rubric of *acculturation*. The author, in working with Linton, and in focusing upon acculturation differentials where two cultural groups were involved in cultural change and interchange, noted in 1940 that larger cultural conflicts disrupting integration within a group resulted in poorer health, mental and physical, for the more rapidly changing culture representatives (10). This position was expanded in the framework of personality theory, in 1956, to include the nature of the culture, that is, its roles and role-conflicts in the setting of the pace and type of acculturation which existed. (Compare items, 10.) Just as *depth* of affect, a function of the quality of defenses, may govern the *quantity* of interactions or communications, so the experiences of early learning, affecting this depth, may influence the individual rates of response, in one direction or another. This formula states, in effect, that family experiences are crucial in determining what Chapple designated as normative interaction levels. Genuine group experiences, in 5-8-person groups, are apparently maturing or socializing in this sense since they provide the setting for normative levels to emerge while providing, even more than in individual therapy, the various parental, sibling and child surrogate figures which so often appear in such milieus. Consequently, when properly organized, they raise interaction rates on the average. It is presumed, when such symbolic substitutions for family figures are made, or when transference and countertransference phenomena occur with greater rapidity, that an advantage is gained by such symbolic introductions of family figures and amnesic experiences. No doubt, this is not only because quantitative rates are increased, but because *depth* and emotional *valence* or *style* are more involved. In the author's terminology, one is introducing the *wider context* and its *bind-*

ing conditions into the stage of affective recognition by inducing the patterned family and social influences (11).

These patterned family and social influences, to the extent they are acquired or transmitted by symbols and express roles, are by definition cultural. Since value orientations and motivational structures meet at this point, depth and style likewise converge. In dealing with symbolic, culturally influenced roles, psychiatry will do well to recognize that such behavior depends upon patterns larger than specific family contexts, but are ingrained and reinterpreted chiefly through family settings. The psychic economy requires some perceptual, affective and cognitive classification and denotation of experiences, much as kinship system, language structure, or ethical and valuational methods in a culture provide the simplifications that allow us to read the social and cultural map. Thus the individual products of any social and cultural influences are not coterminous with the adjustments found in society and culture generally, and we may speak of the uniqueness of an individual or the variance within an illness process. The limits to individuality or even "normalcy" for that matter are set by common experiences in family and extra-familial settings. Because social roles are limited by life-course associations, speech patterns, or styles of emotional expression, they are undergirded by value systems, motivations and culturally determined stresses. In addition to depth of affect, we can ignore style of emotional expression and role-conflicts only at our peril in psychotherapy. Both influence quantity and depth of emotional communications. In short, the wider context of emotional valence and culturally determined roles influences the depth and quantity aspects of psychopathology.

Because of space limitations, only two examples may be given. A Puerto Rican psychiatrist, Torres-Aguilar, reports his observation of relatively high prevalence of catatonic outbursts of a hostile and aggressive sort in schizophrenics of lower class background. Schizophrenics with paranoid reaction, centered in confused sexual identity, are likewise typical and the paranoid elements are freely

expressed. In the neurotic categories, classical hysterical conversions, attacks of fainting more commonly for women, and freely expressed hypochondriacal complaints seem more marked in urban Puerto Ricans of the island than in most modern cultures. Today, such traits are seldom emphasized in reports from other urban scenes. Our observations on Puerto Ricans on the mainland, first generation, run strictly parallel. In fact, all norms of emotional expression and display of affect are more noted among these people. There is, as a cultural pattern, little inculcation of guarded affect, an emphasis upon *soma* and interest in sexual detail, great concern about health, and currently much disturbance occasioned by a shifting, particularly in urban scenes, of the social and economic role positions of the two sexes. Dr. Torres' (15) and our own observations run parallel on finer details than can be given here.

Similarly, the author studied South Italian and Irish schizophrenics of 3 generations. The Italian migrants and their descendants appeared to have a larger proportion of patients having catatonic outbursts of the hostile and destructive sort, while the classical reactions of paranoid type were found in the Irish patients, varying considerably from Puerto Ricans in guardedness, for one feature. All had the "official diagnosis" of schizophrenia, but the differences were vast indeed. In discussions with such patients singly, or even in group situations on the ward, it was helpful to anticipate such variations in emotional patterns and discuss them with the patient on neutral grounds of cultural affiliation. Viewing quantity, depth and style of emotional communications as an integrated balance of personality, one avoids a moralizing, condemnatory or judgmental tone in favor of satisfying discussions of social and cultural roles. The neutral grounds of cultural interest and affiliation provide the wider context of family background and individual experience. Elsewhere, we have called this method of inducing the wider context as the initial step, "cultural push therapy" (10).

In our experience, cultural reference al-

lows for a more delicate processing and ventilation of experiences in therapy. The neutral grounds of cultural interest provide more motivation for achieving perspective on social role positions. Any relationships, going in a series from man to fellow-man (social relations), man to family, and finally degrees of self-awareness, figure in cultural discussions. Even man-to-nature relationships are relevant. Ordinary guide lines of cultural experience give perspective and provide the same life-course phenomena and family roles that are the typical interest of patient and therapist alike. The therapist's acceptance of a person's culture is therefore the first step in his understanding of the family and the individual. For the patient, similarly, self-esteem and self-awareness may well depend on the rapport set up in such interchanges of cultural meanings and implications. In the studies of schizophrenics, Italian and Irish, alluded to above (12, 13), the entire structure of the illness and of current defensive balances depended upon the emotional valences built up in a sub-cultural setting and in a family over time. Quantity and depth of emotional communications varied notoriously with the course of illness, but style of emotional expression, far more crucial, varied with the culture and the role conflicts introduced between generations.

In group psychotherapy, there is opportunity *par excellence* to build up cultural awareness and respected identities. These, in turn, represent a gain, or the occasion, for developing individual perspective on self-images, and empathy for the products of others' lives. For the therapist, who must guide the total process, an awareness of the differing family structures and role conflicts of various cultures and subcultures will provide a key to emotional valences of persons coming from various backgrounds.

Apart from quantity of human interaction, the varying depths and styles of emotional expression point directly to typical roles, which need better understanding and depiction, since these roles, in turn, represent the sorting into modes of action of values, aspirations, motivations and typical stresses. The firm texture underlying conduct is far from biological need alone. Until such keys to behavior, normative and aberrant, are used, we cannot enter into a world of meanings which are otherwise only the sealed-in aberrations of troubled minds.

BIBLIOGRAPHY

1. Bales, R. F. *Interaction Process Analysis*. Cambridge: Addison-Wesley, 1950.
2. Borgatta, E. F., and Bales, R. F. *Sociometry*, 16: 302, 1953.
3. Chapple, E. D. *Gen. Psycholog. Monog.*, 22: 3, 1940.
4. Dreikurs, R. *Group Psychother.*, 9: 115, 1956.
5. Hare, A. P., Borgatta, E. F., and Bales, R. F. *Small Groups: Studies in Social Interaction*. New York: Knopf, 1955.
6. Keller, J. E. *Am. Sociol. Rev.*, 16: 842, 1951.
7. Lowie, R. H. *Social Organization*. New York: Rinehart, 1948.
8. Miller, G. A. *Psycholog. Rev.*, 63: 81, 1956.
9. Murdock, G. P. *Social Structure*. New York: Macmillan, 1949.
10. Compare: Opler, M. K. *Culture, Psychiatry and Human Values*. Springfield, Ill.: C. C. Thomas, 1956; and Opler, M. K. *The Southern Ute of Colorado pub. in Acculturation in Seven American Indian Tribes*. R. Linton. New York: Appleton-Century-Crofts, 1940.
11. Opler, M. K. *Group Psychother.*, 9: 200, 1956.
12. Opler, M. K. *Internat. J. Soc. Psychiat.*, 2: 11, 1956.
13. Singer, J. L., and Opler, M. K. *J. Abn. Soc. Psychol.*, 53: 42, 1956.
14. Compare, Pratt, J. H. *J. Am. Med. Ass.*, 49, 1907; Lazell, E. W.: *Psychoanal. Rev.*, 8, 1921; Marsh, L. C.: *Ment. Hyg.*, 15, 1931; and A. Adler. *Guiding the Child*. New York: Greenberg, 1941.
15. Torres-Aguilar, M. *Personal communication*.

NORMAL DEVIATIONS FROM REALITY

CLAUDE C. BOWMAN, Ph. D.¹

"Reality" is a very ambiguous term, one that immediately raises a host of issues. Gregory Bateson has contributed to clarification here by outlining 5 definitions that can be found in psychiatric thinking(1). In one sense the word denotes the external world as perceived by the senses. This definition contrasts reality to fantasy and projection, but the term is often used in a contrary manner to denote the very subjectivity that is rejected by the first definition, reality referring to the individual's private world. A third definition involves awareness of one's idiosyncratic views and an ability to transcend these individual peculiarities in the interest of greater accuracy and effectiveness. Fourthly, the word appears in the phrase "the reality principle" which is commonly contrasted with the "pleasure principle," thereby suggesting that reality is unpleasant. Finally, reality is often contrasted with phenomena of magic. In this sense it is based upon the conceptions of science.

The relevance of these 5 definitions to the means and ends of psychotherapy is a complex subject that lies outside the competence of the sociologist. Here our purpose is to show that certain degrees of unreality, far from being a handicap to normal men and women, actually contribute to the maintenance of their morale. We shall maintain that the biases favorable to morale are not occasional deviations from normal thought and action but are in fact indigenous to culture and social living.

Now it is evident at once that a particular definition of reality is implicit in this statement of purpose. Let us be more explicit. In the discussion that follows *a sense of reality refers to conceptions of the social environment and of oneself which satisfy the highest standards of objective accuracy.* It may be noted that this definition touches upon the first, third and fifth definitions developed by Bateson. From our point of view realism stands in contrast to the conventional biases and illusions of man's social life.

¹ Department of Sociology and Anthropology, Temple University, Philadelphia 22, Pa.

Immediately the question will be asked, "And who shall decide what is objectively accurate?" Are we not hopelessly caught in the toils of biases both subjective and collective? Actually the dilemma is less formidable than might seem to be the case at first glance. Once the fundamental value of special competence is granted, it becomes relatively easy to establish adequate standards in the complex task of determining reality. An assessment of sociological data and of opinions about these data can be undertaken by scientific experts whose knowledge and judgment tend to approach objectivity. Just as the psychiatrist possesses special competence in judging degrees of reality or unreality in the patient's mind, so the social scientist is equipped to determine not only the nature and extent of distortions in collective thought but also their social causes and effects.

The following examples represent common types of deviation from reality that can be found in American society today. Of course, it is not suggested that *everyone* exhibits these tendencies, but merely that the types of thinking described here are sufficiently common to warrant the attention of the sociologist

NATIONAL CULTURE

The concept "ethnocentrism" serves to emphasize the amount of unreality existing in all cultures. Each folk or nation tends to consider its ways as best and measures other cultures by its own yardstick. The achievements of the past, the rightness of current practices, the greatness of their destiny—such grandiose views are widely supported by the members of a given society. Informal and formal teaching by adults give sanction to the *mores* and this process of indoctrination is reinforced by habits formed in the daily round of activities. In a sense it may be said that, when one member lies—in an approved direction—the rest will swear to it. Thus, each culture generates and preserves a set of biases considered appropriate to its

ongoing life. The "strange," "irrational" or "immoral" ways of other people are viewed with amusement or alarm by the vast majority who, by these reactions, give emotional sanction to accepted patterns of living. Even in the most liberal cultures open-mindedness in regard to basic *mores* is sometimes tolerated but never actively encouraged. Australian aborigines, Japanese, Americans, and all other peoples are expected to follow the fundamental beliefs and values of their respective cultures.

Except during periods of upheaval and rapid change, deviations from cultural orthodoxy are not frequent enough to constitute a serious threat to group integrity and morale. The majority have little desire to run athwart the conventions but grow up to believe what they are supposed to believe. Some sacrifice of reality seems a small price to pay for social approval, especially since most people do not understand obscure issues of reality and unreality and, consequently, are wholly unaware of any "sacrifice." It is true that the more democratic nations do permit critical public discussion but even in these countries the distorting influence of patriotism is quite evident.

The following illustrations bear upon this point. We in the United States want to believe in the essential soundness of our family system, business institutions, schools, system of government, and our other institutions. Out of this patriotic faith the citizen builds loyalty and morale for peace-time pursuits as well as for times of war. It has come as a shock to many to learn that the "backward" people of Asia believe that they are just as important as the United States of America. In our naive way we tend to think that everyone the world over accepts the goodness and greatness of our country as a permanent feature of the universe. We firmly believe that our actions are ever rooted in high moral principles and feel hurt or irritated when our policies are examined by other countries for dollar diplomacy. Moreover, when certain powerful leaders of Asia prefer to avoid clear cut alignment with our side in the cold war, we tend to react with adverse criticism, if not open denunciation. In such ways patriotism may preclude an adequate apprecia-

tion of the problems of Far-Eastern countries.

On the domestic front one of the most noteworthy examples of unreality is the refusal of the general public to face the grim possibilities of war. A naive observer, uninitiated in the processes of illusion-building, might surmise that the development of atom and hydrogen bombs, not to mention bacteriological warfare, would lead our nation to give this problem top priority. But what has been the situation during the post-war years? Civil defense gets small public attention and small public subsidy. Urban re-development proceeds largely on the basis of pre-atomic thinking, increasing congestion rather than encouraging wider dispersal of the population. And what of the private efforts of individual families? Conscientious parents, striving to establish a good home for their children, will look amazed when you ask whether they have made plans for protecting their families in the event that a major war should break out. It is just too horrible to think about.

This is conventionalized escapism, to be sure, but it is the present thesis that such deviations from reality are important to adjustment. What can the individual citizen do, in the face of technological progress and institutional lag, except to indulge in a certain amount of "ostrichism?" Somehow or other he must carry on his daily affairs *as if* such threats did not exist. Perhaps physicists and engineers are perfecting a bomb five hundred times more destructive than those dropped on Japan in 1945 but right now the baby must be fed, the boss is calling for that report, or a party is being planned. The maintenance of morale seems to require that we avert our gaze from the grim possibilities of destruction, and hope for the best.

It is clear that the optimistic spirit has pragmatic value for individuals and groups, signifying faith in purpose and expectations for success. Yet optimism operates as a defense mechanism, the optimist seeing only what he wants to see. Aspects of the total situation that do not fit his orientation are ignored or, if recognized dimly, pushed aside before they emerge into full consciousness. Those holding important administrative positions may expect subordinates to distel their

doubts. Others seek reassurances from family and friends. In numberless ways we support each other in rose-colored views of reality and express disapproval of those who try to puncture the illusions by which we live.

The origins of American optimism must be sought in history. This frame of mind developed readily in a new country, rich in natural resources, expanding industrially and agriculturally, growing in size and power as more and more young, ambitious immigrants came from Europe. An optimistic outlook was an essential ingredient of the enterprising spirit of the 19th century and many believe that it is just as essential today.

SPECIALIZATION

Some degree of distortion appears to be inherent in the outlook of the specialist; indeed, in folk humor, specialists of all kinds are belittled because of their biases and lack of common sense. Now the sociologist realizes that various institutions (economic, political, educational, religious, recreational, etc.) in modern society are characterized by an increasing proliferation of structure and function, leading to individual careers which are more and more specialized. Yet, in the midst of this growing division of labor, the individual tries to preserve a sense of his significance and worth. In some occupations, such as routine tasks of a large factory, it is difficult to do this; but even in careers of higher status there is a constant struggle to preserve a sense of personal significance. In this effort a full and steady sense of reality may be a distinct handicap.

The academic profession may be used as an illustration. As subject-matter in various fields of knowledge has broken down into more specialties, scholars tend to concentrate upon knowing more and more about less and less. Under these circumstances it is easy, and perhaps necessary, to over-value the particular segments of knowledge where one's own proficiency lies. Such over-valuation seems integral to professional adjustment in the academic world as it exists. He who plays the game according to the rules is likely to gain promotions, offers from other institutions, an impressive list of publications, and other advantages. College presidents may deliver stirring addresses criticizing the narrow

specialist, and a few professors, particularly in obscure colleges, may resist the trend but these instances have little effect upon major tendencies in the academic profession. (In a few universities the embryonic professor can now take broader graduate programs in the social sciences or humanities but it remains to be seen whether this type of curriculum will have a significant impact upon Ph. D. education.)

It is the function of college administrators to construct a broad overview of institutional purposes. Insofar as administrators fulfill this function, they do bring a more realistic perspective to bear upon major decisions, decisions compounded of many ingredients contributed by various specialties both within and without the institution. Yet it cannot be assumed that top administrators are consistent realists. The ego feelings of these leaders are likely to be deeply involved in their organization. Such persons look upon the enterprise as peculiarly theirs; its successes and failures are felt more keenly, its good name is related to personal pride, and faith in the institution is an extension of the leader's faith in himself. Thus, the typical college president wants to believe that the collegiate *status quo* is essentially sound. "Our college is doing an excellent job, the faculty is capable and contented, the students eager and appreciative," he tells himself optimistically. Like other practical men of affairs he accepts the reality principle only so far as it is practical to do so.

Higher education has been used as an illustration but the same processes are evident in other fields. Within the professions there are at least 3 conditions leading to occupational bias. 1. A long period of preparatory education, involving time, effort, and money, leads the professional person to place a high valuation upon his achieved proficiency. 2. Colleagues in the same field tend to support each other's evaluations and rationalizations. 3. Professional organizations also contribute to morale by holding conferences and performing various rituals designed to give further sanction to group purposes. If, out of this multilateral process of indoctrination, the individual begins to magnify the importance of his chosen career, it should occasion little surprise.

SOCIAL CLASS

A common illusion is that there are no social classes in the United States. Many like to think that one person is just as good as another in this democracy where "all men are created equal." Now it is true that social stratification in this country does not consist of historically fixed categories sharply separated from one another by insurmountable barriers; instead, we have an "open class" system. Nevertheless the factor of status is very important in social relations. Groups on a vertical scale show relative differences in manners, morals, material comforts, occupations, residences, and civic participation from those of a higher or lower status. For this reason we may properly speak of class sub-cultures.

People of various social levels tend to develop and defend an outlook on life that is functionally appropriate to their particular position. Some in the highest strata hold to the complacent opinion that the cream of society inevitably rises to the top, ignoring completely such influences as family background and inherited wealth. That broad segment of society known as the middle class commonly considers itself to be the salt of the earth. These people assume that all "sensible" folks think as they do about politics, careers, family life or education. The lowest strata also have their special ideological slants. The rich and powerful are "lucky," the poor "unlucky." Some will even assert that the higher classes operate on a lower moral plane while they are "poor but honest." To be sure, such face-saving rationalizations may contain elements of validity—but elements of unreality too.

Since the class-bound person seldom carries on extensive communication with those of a higher or lower status and since most of his associates are also class-bound, he finds it easy to retain these parochial views. In this way certain distortions are supported by the various classes—with favorable effects upon morale.

MINORITIES

Racial and national minorities may also show a reluctance to face reality. An ambitious Negro may insist upon believing that

"there is plenty of room at the top," minimizing the handicap of prejudice. And why not? Assuredly it is not practical for him to dwell upon such handicaps. Similarly, Jewish men and women sometimes wear blinders so that they will not see anti-semitism. Indeed, some are sharply critical of other Jews who insist upon taking notice of prejudice. Again, in the interest of morale, why look unpleasant reality squarely in the face?

LOVE AND FRIENDSHIP

Through the ages it has been said that love is blind. Today it is fashionable among family sociologists to decry romantic illusions and urge a more realistic point of view. To some extent the new realism is salutary, for it represents the substitution of informed intelligence for traditional ignorance and mysticism. Yet the dynamics of teachers and textbook writers who criticize romanticism will bear further scrutiny. Perhaps the disillusionments of middle age are involved here. Also, a puritanical value system may lead such persons to emphasize the gospel of work and, correspondingly, to distrust those pleasures that detract from the serious business of "getting ahead."

From whatever sources it arises, this "realism" fails to understand that, in heterosexual love, the reality principle is at times "more honored in the breach than in observance." The dependent person, seeking security in the love of another, may magnify the other's strength and dependability because of this inner need. Other idealizations may concern beauty or achievement or ethics. These elements of unreality are not necessarily harmful; in many instances they are distinctly advantageous to both persons.

Parental conceptions of children can be equally unrealistic. Parents often have exaggerated notions concerning the capacities and achievements of their children—as every teacher knows. Conventionally we come to expect a certain amount of illusion on the part of parents and even view it sympathetically. Of course, there will be disappointments when such conceptions depart too far from reality but, within limits, sentimental biases constitute a bond of cohesion in family life.

on a lower plane of emotional attachment. This principle is evident in friendships. We tend to be somewhat unrealistic about those whom we love, and we tend to minimize those who criticize them. Perhaps many of us play politics where friends are named: we recommend them for positions because we like them and not because they are in the best light of reason, the best qualified. Such biases are given open approval in a culture that stresses the value of friendship.

At the same time friends are expected to contribute to one's own morale by praising achievements and minimizing failures. In this way favorable self-conceptions are maintained and the harsh impact of reality is softened. Thus, it may be said that a person's friends are part of a pleasant conspiracy to keep him in good spirits.

REFERENCES

This leads to a final word about self-attitudes and mental health. According to the definition given earlier, realistic appraisals of one's self are based upon objective assessment of a whole range of relevant factors. On the other hand, the maintenance of morale may require some degree of emphasis upon ego-gratifying factors in the total situation of the person and a minimizing of ego-

It may seem to reflect a very serious, if not alarming, situation and encouraged by the evidence of pre-adolescence. This is a complex question with many dimensions and the following highlights the different kinds of phenomena which are currently associated with it.

— 11 —

The foregoing provides a contrast with several dominant group theories in contemporary social and clinical psychology which stress agency. The author is not in agreement with those who believe that such agency being given to people gives them the freedom to act or to respond and act. It is the present theory that individuals and groups naturally develop values consistent with their standards and purposes. This tendency involves elements of morality, but it fosters mental health and not necessarily society.

INDEX TO VOLUME

- The Social Movement in England. New York: W. W. Norton, 1951.

RELATIONSHIP BETWEEN SOCIAL ATTITUDES TOWARD AGING AND THE DELINQUENCIES OF YOUTH¹

MAURICE E. LINDEN, M.D.²

INTRODUCTION

It must be stated at the outset that in effect this paper adds another imponderable to already extensive lists of factors contributing to youthful misbehavior. It is to be hoped however that it will not be classified in that group to which Edwin J. Lukas(1) refers when he states, "Each so-called 'preventive' enterprise has its own concept of causation to which it adheres with a tenacity which would evoke more admiration if the concept were more valid."

At the risk of oversimplifying a serious and complicated field of inquiry the writer is emboldened by a group of observations having a uniformity that urgently suggests they may well be facts:

1. Certain social changes predominantly in western societies have taken place during recent decades which constitute a shift in emphasis toward children's needs, resulting in the 20th century's often being referred to as "The Century of the Child"(2).

2. Concomitant with unprecedented population increases in the late mature categories there is abundant evidence of increasing dependency by the elderly upon public institutions, often associated with diminishing acceptance of family responsibilities toward the elders. A factor of elder-rejection plays a prominent role in such transfer of obligation (3).

3. Psychiatric clinicians have noted a widespread fundamental change in the clinical picture of the neurosis, with diminishing numbers of the classic neuroses but an overwhelming increase in character disturbances in which "personality" and "symptom" are practically indistinguishable(4).

4. Increased attention in Western culture during recent years has been drawn to the problem of youthful misbehavior. The Di-

rector of the F. B. I. in the United States has issued a public statement to the effect that there has been a definite increase in juvenile delinquency rate disproportionate to population growth.

5. There is fair evidence that countries and ethnic groups having a low juvenile delinquency rate are those whose cultural atmosphere reflects veneration and, or at least, acceptance of the aging and the aged. Agreement is general among sociologists and anthropologists(5) that elder-veneration, tradition-boundness, and a low rate of youthful delinquency are frequent concomitants.

The present thesis suggests that the foregoing social findings are mutually interrelated in a psycho-social equation; that a cultural factor of elder-esteem or elder-discard enters intimately into character formation in the development of personality; that the characterological attributes having to do with attitudes toward the aging are decisively linked to value systems governing moral and ethical principles and conformity; that devaluation and discard of the late mature generations are real social hazards potentially damaging to children; that the absence or distortion of a concept of social authority in which the status of the elder plays a significant role contributes importantly to a widespread looseness, waywardness, and rebelliousness of youthful behavior; and that without losing any recent social gains it is possible to influence favorably some aspects of the character formation of youth by restoring to the process of aging a connotation of authority and an implication of social reward.

THE CENTURY OF THE CHILD

Today the long overlooked needs of children have begun to receive attention. What is often forgotten, however, is the tendency of human nature to overcompensate for its defects, and to concentrate with almost fanatic enthusiasm on newly uncovered areas

¹ Presented at the First Pan-American Congress on Gerontology, Mexico City, September 18, 1956.

² Director, Div. of Mental Health, City Hall Annex, Philadelphia 7, Pa.

of social omission. The unfortunate consequence is the impoverishment and neglect of other sectors of social endeavor.

There is abundant evidence that the qualities of youth are the preponderant social goals. Note the prevalent anxiety regarding chronological age. Witness the omnipresent emphasis on newness, sleekness, freshness, mobility and change. But, in particular, observe the everyday tragedy of people moving blindly toward the later years with their inner vision arrested deceptively upon a fond mirage of the irrecoverable past.

Mankind hardly deserves any kudos for protecting and guiding its own helpless developing neophytes. Such are the functions of inherent biological drives. But the severe test of a civilization is found in its capacity to advance beyond the simply biological, and to create systems of group living in which personal welfare and meaningful existence are every participant's birthright.

We cannot escape the present reality in which the qualities of the young side of life are upgraded.

ELDER-REJECTION

Today more people remain healthy, live longer, and reach later maturity than ever before in history. The implication of social progress is tempered by certain other parallel disturbing facts: the tremendous number of older people for whom admission is sought in mental institutions; the mushrooming nursing home enterprise; the immense proportion of elderly on public assistance rolls; the widespread absence of social and recreational provisions for older folks; the marked increase in hospital occupancy by the chronically ill; the large numbers of solitary and bewildered aged existing in substandard living conditions, passing time aimlessly awaiting the end.

Certain exigencies of urban living plus a deep psychological predisposition to regard aging as unattractive(6) have forced ever greater numbers of families to relinquish a time-honored responsibility and divest themselves of the duty to care for their older members. The closing decades of the century may mark the *Era of the Nursing Home*.

That the windup of a life in the segregated quarters of some types of institution constitutes an empty and uninspiring goal can hardly be questioned. And there is logical foundation for the conclusion that all forms of social and psychological rejection of the elders are incorporated in the self-concept of the aging and eventuate in self-rejection that heralds personality regression and disorganization.

More important still are the effect of attitudes on the character development of oncoming generations.

CHARACTER DEVELOPMENT AND DISTORTION

The formerly common classic neuroses, such as hysteria, obsessional and compulsion neurosis, were based on rigid prohibitions, suppressions and extravagant punishments. It has been said(7) that "the inconsistency of the modern neurotic personality corresponds to the inconsistency of present day education. The change in the neuroses reflects the change in morality."

Character may be defined as an individual's habitual mode of responding to demands from various sources within and without the psyche(8). It is socially determined(9). The concept of character is closely analogous to the concept of "ego" as formulated in modern psychiatry. The ego has many functions, among them being the mediation among the demands of the instincts, the pressures of conscience and certain internal automatic repetitive tendencies. Even in greater measure the ego, or character, is called upon to integrate intimately into its structure the innumerable surrounding social stresses including the mores, ethics and group attitudes.

Uncomplicated observation suggests that the perpetuation of social and cultural values, the development and support of moral and ethical judgments, the evaluation and maintenance of the substance and resources of knowledge, as well as a related assortment of intellectual activities are the inherent functions of the mature mind. Man's concept of God and his ideal representation of the elder are the authorities for systems of discipline. They serve also as the source of power and impetus to effect a realization of social plan-

ning, to create and maintain systems and modes of social welfare, and to preserve the thread of philosophical continuity that runs through the basic principles of a civilization.

The development of an ideal social conscience in a child is consequent upon the success of psychological mechanisms through which he incorporates the best personal and social symbolic images available for identification. The inspirational goals that antecedents personify and the regard of the child for his elders figure significantly. The child also will absorb the inconsistencies, the unsolved problems, the prejudices and antipathies of his educators. As Johnson(10) has pointed out the child incorporates into his character factors operating from the unconscious structures of the minds of his educators.

The maintenance of the parent and grandparent ideal as the source of wisdom, goodness and love, judiciously associated with adherence to principle is significant in the creation of an ideal social character in the child. The socially oriented structure of his character becomes weakened if there is need for rebellion against his educators. In most individuals rebellion against the elders represents a seeking after independence and personal expression. In an ideal society, regardless of individual rebellion, an aura of respect for the elder and elder authority would remain constant.

The social inconstancy of parental character, a cultural rejecting attitude toward older people and a generalized mitigation of their social authority are readily absorbed in the character formation of the developing child.

The older generations, by virtue of psychological and physiological aging processes, cannot long endure the pressures of downgrading and hostility to which they may be exposed and their diminishing resistance may progress toward social powerlessness. Such debasement of the elder in the role of and as the symbol of authority tends to diminish the meaningfulness of all social authority. Youngsters may then incorporate into their own character an attitude of regarding aging mainly as decline, decrepitude and loss of purpose. When this happens, the child may

establish himself in his own eyes as a potent and autonomous authority.

YOUTHFUL MISBEHAVIOR

The decline in parental influence which parallels the decline in social authority of the older generations is currently reflected in a widespread need for an increase in police authority. That is, wherever family control is weakened, society finds it necessary to increase public and impersonal methods of behavior control.

This is not the equivalent of judicious parental control. Policing agencies are generally regarded as restrictive and punitive, not as loving guidance and training agencies. The immature character finds the presumed punitive agencies challenges for rebellious and hostile acts. Thus, what in ideal family life would be beneficently controlled rebellion, in the social setting becomes open conflict.

Since policing services are looked upon as law enforcement instruments the distorted character's behavior may tend to avoid only that which is illegal in order to remain clear of the law. Such technical conformity permits a great latitude for actions that are socially opprobrious but not strictly illegal, and nefarious and discourteous practices of all kinds become an increasing reality. There is real social danger and potential damage to children in a social setting that demerits the elders.

Impressionable youth lacking adequate older objects for consistent identification may develop an enormously exaggerated belief in their own capacity to destroy tradition. They may disregard the mores, flout ethics, and discard historically established qualities of discipline.

Statistical tabulation(11) of juvenile offenses reveals a high incidence of acts of furtiveness and stealth or incorrigibility and ungovernability. The minority of problems are in the area of passion or bold aggression.

An overdramatized and grandiose self-concept in the young contains the danger of contagion. The illusion of being "master" is communicable among the immature. It is a deception that may be basically responsible

the revolutionary abolition of tradition by an entire social group and the acceptance, if even only temporarily, of a neo-devotion created on a substructure of personal aggrandizement, impulsiveness and hedonism.

ELDER VENERATION

A lack of leadership uniformity which seems intimately bound to degradation of the elders furnishes fuel for hot rebellion in younger persons whose drive toward unwise autonomy is thus reenforced. Within the family a set of attitudes is often created in the young as they observe the now hidden, now open, brutality practiced upon their grandparents by their parents. "As the child incorporates in himself the image of his parents as part of his internal organization he is absorbing among other things this very pattern of sadism against the senior elder. Thus is guaranteed the fact that the vicious cycle of elder rejection will remain unbroken generation after generation" (6).

Tradition-bound societies, some of which are exemplified in the ancient Chinese, Hebrew and Indian cultures, can boast of a low rate of juvenile delinquency. The common denominator in tradition-boundness is respect and veneration of the elders. A return to the "good old days" with increased irrational authority of the parents and elders, it is said, would help materially in reducing the psychological breakdown that eventuates in senility, as well as reducing the rate of youthful misbehavior. However, many social scientists and community leaders would decry any retrograde cultural change that would imply loss of any social gains enjoyed today.

Thus there is need for social planning so designed that the late mature generations are reassigned social recognition as well as the comforts and rewards to which human nature aspires.

Within the family the parents cannot relinquish their affectionate and responsible educative role without insidiously affecting the character formation of the young; and the foundation for good government and good citizenship is to be found in the proper structuring and functioning of each family.

If the hypothesis (12) is accepted, that

normal maturation into the later years means increasing altruism in the older mind, then it is possible to conceive of a society in which collective social authority is irrevocably linked with elder-veneration without the necessity for sociological retrogression. It is the very nature of benevolent elder authority to employ its power not to command and dominate, but to develop leadership among oncoming generations, and to serve as adviser, consultant and coworker.

CONCLUSION

In the awesome network of social forces that relate to character and behavior distortion the hypothetical factor herein presented concerns itself with but one thread, perhaps a guyline. There seems to be a commonsense logic in the viewpoint that degradation of the elder role-model of social authority is paralleled by an increase in arrogance and wilfulness in the young.

The fact remains that aging in our culture is generally unattractive and unrewarding. A newspaper supplement recently stated the case succinctly, "the world is made for youth and youth is the time for fun." Can we expect the young to make provident and prudent psychological preparations for the advancing years, when the later period is so often seen in threatening aspect.

Desirable character formation in the young requires that the group character of a culture present a social atmosphere of dignified elderhood in which symbolic authority is implicit, an authority enriched with warmth, humanism, and charity, yet firm in its leadership, independently motivated, and oriented around group principles.

Nature has endowed youth heavily with a capacity to achieve its own rewards. Aging needs social support. If the rewards of youth are to be wisely invested to insure that lives are well spent, then the elders must be reinstated in their time-honored position as brokers in experience and consultants in living.

BIBLIOGRAPHY

1. Lukas, Edwin J. Nat'l Prob. Assn. Yearbook, 1946, p. 33.
2. *Ibid*, p. 105.

3. Linden, Maurice E.: Jewish Sec. Serv. Quarterly, 31: Fall 1954, p. 80.
4. Fenichel, Otto: The Psychoanalytic Theory of Neurosis, New York: W. W. Norton and Co., Inc., 1945, p. 461.
5. Bowman, Claude C.: Prof. of Sociology, Temple University, Philadelphia, Pa.—Personal Communication.
6. Linden, Maurice E.: Social Casework, Feb. 1956, p. 75.
7. Fenichel, Otto: *op cit.*, p. 464.
8. *Ibid*, p. 463.
9. Fromm, Erich: Am. Soc. Rev., 9: 380, Aug. 1944.
10. Johnson, Adelaide M.: Sanctions for Superego Lacunae of Adolescents. In Searchlights on Delinquency, Ed. K. R. Eissler, New York: Int. Univ. Press, 1955.
11. United Nations Report, *op. cit.*, p. 4.
12. Linden, Maurice E., and Courtney, Douglas: Am. J. Psychiat., 109: 903, June 1953.

FOLLOW-UP STUDY ON THORAZINE TREATED PATIENTS¹

ELSE B. KRIS, M. D., AND DONALD M. CARMICHAEL, M. D.²

Modern drug therapy has brought about a considerable increase in the number of patients returning to the community. While a great deal of knowledge has been accumulated on the effect of chlorpromazine on hospitalized patients, very little was known about whether the achieved remission of symptoms would be a lasting one, whether maintenance therapy was indicated and if so for how long a period. Last but not least, there was understandable concern about possible effects of long term chlorpromazine administration.

To study these questions a unit was set up with the purpose of keeping a limited number of patients released from mental hospitals in the New York metropolitan area under close supervision.

This report deals with 160 patients who were kept under close supervision for one full year. They came to the Manhattan After Care Clinic in response to special request: the directors of several New York state hospitals in the metropolitan area had been asked to advise patients, who had shown improvement after Thorazine treatment, to report to the clinic on the day immediately following their release from the hospital.

There were three different groups of patients under control:

Group I: Consisted of 57 patients who, during their hospital residence, had been treated with Thorazine and who, after withdrawal of the drug, maintained their improved mental condition and consequently were released from the hospital.

Group II: 82 patients who, during their hospital residence, had received Thorazine and who required to be kept on a maintenance dosage of the drug.

Group III: 21 patients who had been released from a mental hospital 1-4 years ago, had adjusted well until recently, when they began to show symptoms of beginning re-

lapse and for this reason were brought to the clinic in an attempt to prevent their readmission to a mental hospital.

Patients in all three groups were seen regularly once a week. Home visits by a social worker were made occasionally.

Group I: The 57 patients were between 18 and 63 years old. They were diagnosed as follows:

- 25 Schizophrenics
- 16 Manic-Depressive, Manics
- 2 Psychosis due to Alcohol
- 1. Involutional Psychosis

Nineteen of these patients have had a hospital residence of 3-18 months and had been released on Convalescent Care after several weeks of observation following withdrawal of the drug. Thirty-eight patients in this group had been hospitalized for 2 to 10 years. Sixteen of these patients, who have had such a prolonged hospitalization, had to be placed again on Thorazine a few weeks after their release on Convalescent Care as they began to show restlessness, irritability, anxiety and other signs of returning psychotic manifestations. In 2 of these patients, the return of symptoms came about so rapidly and so fulminantly that they were returned to the hospital immediately. The other 14 patients are now on maintenance dosage of Thorazine and are again symptom-free.

Group II: These 82 patients ranged in age between 17 and 68 years. They were diagnosed as follows:

- 48 Schizophrenics
- 19 Manic-Depressive, Manics
- 4 Psychosis due to Alcohol
- 11 Involutional Psychosis

Among these patients, 23 have had a hospital residence of between 2 and 10 years and 15 have had 2-9 hospital admissions of various duration. Eleven patients in this group had to be returned to the hospital. For better evaluation of circumstances leading to

¹ Read at the A.P.A. Regional meeting in Montreal, Nov. 8-11, 1956.

² After Care Clinic, 2 West 13th St., New York City.

these returns, it seems important to consider the facts in some detail.

Patient, A.H., diagnosed as Manic-Depressive Psychosis, who, on his initial visit to the clinic on the day following his release from the hospital, had been found to be in a pronounced hypomanic state, became assaultive the next day, was taken to the City Jail and from there was returned to the hospital.

Another patient, G.C., diagnosed as Dementia Praecox, Catatonic type, who had been hospitalized for 8 years and who, on her initial clinic visit, was found to be highly confused was returned to the hospital by the family on the day following her clinic visit.

Four patients had not taken the drug as was found out after their return to the hospital.

In 5 of the 11 patients in this group, who were returned to the hospital, the social situation present was extremely unfavorable and in at least 2 cases, it is felt that better placement in the future could make attempts toward social reintegration more successful.

All patients in Group II were kept on a maintenance dosage of Thorazine ranging between 50-150 mgm. daily. They received, at first, the maintenance dosage prescribed at the hospital. However, it was found to be necessary to change the dosage in accordance with the individual requirements, either increasing or lowering it.

Though several patients were reported to have had some side effects from the use of the drug while in the hospital, the only complaints voiced since their release from the hospital were drowsiness, sleepiness, constipation. As many of them stated that these side effects interfered with their work and as it was felt that drowsiness, in particular, might eventually be the cause of some accidents, the dosage was, where possible, adjusted in such a way that the drug was given in one single dosage at bedtime. Where it was felt that an additional dose during the day was absolutely necessary, the patients were admonished to take the morning medication after breakfast and to rest for about one-half hour before going to work. The only side effects occasionally seen in this group were mild skin rashes which easily responded to treatment with hydrocorton ointment.

The importance of *variation* in the maintenance doses administered to each individual

patient can be best illustrated in the following two cases:

Patient, A.T., got along well on a maintenance dosage of 100 mgm. Thorazine given at bedtime. She was working, and as her parents with whom she lived were both ailing, she was proud of the fact that she was now not only able to contribute to their actual support, but could also afford some luxuries for them, like a television set which she had bought on installments, etc. One day, her boss had found out that she had been a mental patient and on the ground that she had concealed basic information when applying for the job—she was fired. She became very upset and when seen at the clinic was advised to stay at home for a full week and was placed on 300 mgm. Thorazine (given in 3 equal doses) daily for 2 weeks. During this time, she was visited by the social worker at her home several times in addition to her weekly clinic visits. At the end of the second week, the dosage was again reduced to the previous level of 100 mgm. daily. At the end of the third week she had found another job, and is maintaining her level of adjustment up to date. It is felt that only this quick increase of Thorazine dose prevented complete relapse in this as well as in other similar cases.

Patient, P. O., an alcoholic, who had received 200 mgm. Thorazine daily, complained that he began to feel on the verge of drinking again. The dosage was doubled for 2 weeks and to date, several months later, he has not reached out for the alcohol as yet, and was able to hold his job, while receiving 100 mgm. twice daily.

As patients began to show signs of restlessness, tension, return of symptoms of anxiety, insomnia, failing appetite, it was found that an increase in the chlorpromazine dosage over a few days followed by gradual decrease to the original amount of the drug seemed to control these symptoms so that the individual continues to function on a satisfactory level. As family problems arise and social or economic stress becomes severer, the dosage of the drug seems to require adjustment. It was noted that frustrating life situations precipitate recurrence of symptoms, which if not checked quickly tend to lead to complete relapse.

Group III: This group consists of 21 patients who had been released from a mental hospital several years ago. Five have had several hospital admissions. Only one of them has had Thorazine while in the hospital. As they began to show return of psychotic symptoms, either the patients themselves or their families contacted the clinic asking for advice and assistance. Four of these patients came to the clinic only after

having consulted their family physician who had given them 25 mgm. Thorazine daily for 1-2 weeks and as the symptoms became worse instead of better, they resorted to calling the clinic. As all the laboratory tests had been found normal, they were all placed on 100 mgm. Thorazine three times daily for 2 weeks. During this time, they visited the clinic once a week and were seen by the social worker in their homes twice each week. All but one patient tolerated the drug well and after gradual reduction of dosage are presently found to be symptom-free again. Eight are no longer on maintenance dosage and have gone back to their jobs. Two patients in this group had such a rapid relapse that the symptoms could not be checked by Thorazine treatment on an ambulatory basis and they had to be admitted to the hospital.

The case of A.A. seems to be worthwhile reporting here. He has been hospitalized on several occasions and when released from his last hospital residence 2 years ago, had been in a state of defect, but was able to function on a primitive level, working only in his father's store. When the family called the clinic, it was stated that the patient has reached again a very disturbed state, refused to take care of his personal needs, did not come to the family meals, was withdrawn, did not talk at all. When brought to the clinic, he was found to be completely disheveled, his hair reaching down to the shoulders as he had refused to see a barber. He was mute and resisted any attempt to get him to answer simple questions. After 2 weeks of 300 mgm. Thorazine daily he was alert, talking, pleasant, clean, he had a haircut, smiled and answered questions readily. The dosage was gradually reduced and presently he is, for the past 11 months, on 100 mgm. Thorazine at bedtime only. During this time, he has applied for a job on his own accord and is working as a garage helper. He spends his free time going to the movies, visiting friends and going to parties. He has recently made a vacation trip to Florida with some friends and is talking about his first experience of flying with great delight.

One patient in this group did not tolerate the drug, but developed symptoms of an allergic reaction, the temperature going up to 104° F. The blood count and differential count had remained unchanged. The drug was immediately discontinued. Therapy was then started again 10 days later with the same untoward response after the second dose, this time of only 50 mgm. per dosage. Thorazine was again discontinued. Though the patient had only 4 days of medication altogether, she became less tense and irritable, and up to date is able to maintain sufficient emotional balance to be able to function at home.

This study has, however, shown some more factors which seem to be too important

to be overlooked. The difficulties encountered by many of these patients after their release from the hospital are manifold and are frequently so severe that they are bound to eventually exert unbearable stress resulting in return of psychotic symptoms leading to the patient's return to the hospital.

CASE I.—Jerry B. comes from a broken home. He was 4 years old when his parents separated and was left with his mother. There were no siblings. When he was 8 years old his father, whom he only saw sporadically, remarried. Jerry was always jealous of the children of the second marriage of his father. His own mother had little understanding and patience with him. At the age of 10, he began to have difficulties at school, gradually became more and more aggressive and abusive to other children and at the age of 13 had to be hospitalized. From then on, he was almost continuously in the hospital until finally at the age of 19, after a course of chlorpromazine treatment, was released on convalescent care. He was continued on a maintenance dose and did quite well. He went to trade school and in spite of marked lack of self confidence came out as top of the class at the end of the school year. Throughout this year of convalescent care, his mother showed considerable ambivalence toward him, being one day unduly concerned, the next day openly rejective of him. While in school, he had been able to maintain his level of adjustment in spite of his mother's attitude. However, during vacation time, the difficulties between Jerry and his mother became more and more pronounced, until one day at the clinic he expressed the desire to be returned to the hospital. When questioned about his reason for this, he stated: "Don't you see, neither my mother nor my father cares about me. The hospital is the only real home I ever had." All attempts toward reassuring him were unsuccessful, as were all attempts to place him in a foster home. Two weeks later, the mother reported that Jerry had become very upset and she had had to return him to the hospital.

CASE II. A.S. who had been in the hospital for about 18 months, was released to the custody of her sons with whom she had lived prior to her hospitalization. On the way home from the hospital, the sons revealed to the mother for the first time that they had moved out of the apartment which the patient had occupied for over 30 years. Moreover, the older son had married and the mother was now faced with the situation of sharing the new apartment, in a completely new neighborhood, with a daughter-in-law, who was a complete stranger. Out of her old possessions, there was not one single item left. It is understandable that this patient became extremely upset and to this day, 6 months later, she still has not made a full adjustment. "I don't know a soul in the vicinity, I can't handle all these new gadgets they bought, I don't know, does the girl live with me or do I live with them?" It is felt that the only reason why return to the hospital was prevented so far is the fact that

she is seen regularly once a week and occasionally more often and supportive therapy is being offered. This, together with the Thorazine maintenance dosage which had to be adjusted several times according to needs, seems to have kept her out of the hospital up to date.

CASE III.—Mrs. C.M. had been hospitalized for over 4 years. In spite of the fact that her husband during the years of her absence had become an alcoholic, she not only adjusted well to life in the community, but even managed to get him to stop drinking, took complete control of her household, took active part in the parent-teacher organization of her sons school and lead again a normal social life. All went well for 8 months during which she was kept on a maintenance dose of 50 mgm. Thorazine daily. Three months ago, when visiting the clinic again, she was found to be tense and quite upset, looked drawn. When asked about the reason for this, she started to cry and gave the following tragic account:

Her 15-year-old son when running after another boy had fallen and injured his right knee. As the pain persisted he was taken to the family physician and in the course of examinations it was found that there was a malignant tumor of the femur. He was admitted to the hospital for observation and she had just received word that a high amputation would have to be performed and that even with this operation chances for his survival were rather poor. In response to this sad news her husband has started to drink again. Upon her own request she visited the clinic more frequently and her Thorazine dose is being adjusted from week to week. The boy, now after a high amputation of the right leg is still hospitalized and she visits him regularly every day. She has learned to face the situation and is even able to give her husband so much support that he can stay away from the alcohol. She is fully aware of the fact that her boy's days are counted. It is felt that both supportive therapy as well as the Thorazine have so far helped this woman to maintain her emotional balance and have prevented a relapse in this patient, who without this, undoubtedly and understandably would have broken down under the impact of a cruel fate.

In summarizing what has been observed so far, the study seems to indicate that there are far less untoward side effects caused by chlorpromazine even when taken for a prolonged period of time than might have been anticipated. But, it appears to be impera-

tive that these patients be seen regularly for proper control of dosage, not only in order to avoid unpleasant complications, but also to vary the dosage according to individual needs, taking into account the increased stress situations which have to be faced by these patients outside the hospital.

It seems that a single daily dosage given at bedtime (50-150 mgm. Thorazine) can in the majority of cases supply a sufficient amount for the maintenance of the level of improvement and, at the same time, keep the patient from suffering from drowsiness and other side effects which might interfere with work. This is important because of the 82 patients presently on maintenance dosage, 58 are working, 41 of them receiving a bedtime dosage only.

Patients who have had a long duration of illness always seem to require a maintenance dosage, as they do show, sooner or later, return of psychotic symptoms when the drug is discontinued.

Another important reason for seeing these patients in regular and frequent intervals is the need to determine whether or not the drug is actually being taken. It happened on various occasions that patients when coming to the clinic were noticed to be tense, irritable. Investigation frequently revealed that the drug had not been taken for several days. Stress situations requiring change of dosage can, too, be discovered in due time, only, if these patients are seen frequently enough.

Social factors should be kept in mind as they can eventually cause failure in the attempts toward readjustment of these patients. Then Thorazine, a most effective and valuable weapon in our fight against mental illness, could be discredited as ineffective where so frequently unfavorable social situations are actually to be blamed for these patients' return to the hospital.

RESULTS OF FOUR YEARS ACTIVE THERAPY FOR CHRONIC MENTAL PATIENTS AND THE VALUE OF AN INDIVIDUAL MAINTENANCE DOSE OF ECT

GUNTHER E. WOLFF, M.D.¹

More than 4 years have passed since we started a more active treatment for our geriatric female mental patients at the Camarillo State Hospital. The *systematic* use of ECT for this type of elderly patient has never been attempted before though some are on record who have received occasional ECT for acute emergencies.

It was our hope to relieve the condition of the most pitiful patients. Some were completely withdrawn, refused to eat, tried to commit suicide or in a most morbid way played with or ate their excrements. Others were destructive to themselves or their surroundings, tearing up their mattresses, banging the doors, screaming at the top of their voices or attacking patients and attendants if not heavily sedated or in restraint. Certainly this was a life so full of suffering and misery that it far surpassed any we had encountered in patients afflicted with cancer or other chronic organic illnesses.

ECT is a well established procedure in our armamentarium and we like to call it the "surgery" in psychiatry. In spite of this fact no treatment in any field of medicine has been so handicapped by sharp and unjustified criticism. This was never more evident than during the last 2 years when the pages of our medical journals have become crowded with articles concerning the tranquillizing drugs. Instead of waiting to ascertain that no side or after effects of these helpful drugs might develop, statements have been made again and again that these drugs will reduce or eliminate ECT. One article from a quite prominent author even went to the extent of saying "Electric shock is not only dreaded by patients, but also fails to show permanent therapeutic results except in depression" (is that nothing?). "Less dramatic and brutal than Electric Shock, insulin therapy also has only transitory effect on Schizophrenics." Notwithstanding this widely held opinion nothing

has convinced us more of the value of ECT in certain cases than our results during the last 4 years. We have been using every method to help our patients. Many have become more cooperative, relaxed and amenable to psychotherapy with tranquillizing drugs. However, quite a number could not maintain their improvement and others continued to be very disturbed, either depressed or hyperactive. They received ECT and the majority have shown improvement which no other therapy had accomplished.

Of 200 patients now on active treatment, 61 are receiving tranquillizing drugs only; 82 are on ECT only; and 57 are on ECT plus tranquillizing drugs.

We were fully aware that our work involved calculated risks such as complications from the cardiovascular system or occasional fractures. If these had materialized part of our purpose might have been defeated; however, none of these accidents occurred and our initial results were very impressive and encouraging. We wish to mention here that we might have been easily misled. During the initial period we had 2 patients approved by staff for ECT; one of them died from an acute coronary thrombosis the day she was approved and another the day after approval, from a cerebral hemorrhage before having received *any* treatment. If they had received even one treatment, who could have judged whether or not death was the result of ECT?

From the outset we *never* believed that the "death fear" or the "feeling of punishment" could be responsible for the good results of ECT, an opinion which unfortunately is still prevalent. We were very much impressed by the work of Funkenstein and his co-workers who since 1949 have proven that in many mental conditions, a disturbed homeostasis of the autonomic nervous system is present and that after successful electric convulsive treatment, homeostasis is re-established. In the last few years research has further brought out the fact that bio-

¹ Camarillo State Hospital, Camarillo, Cal.

chemical and physiological changes in the brain tissues of mentally disturbed patients are responsible for their illness, and that these changes are often reversible. We older physicians still remember our utter ignorance of the cause of diabetes or pernicious anemia until the discovery of insulin and the liver enzyme changed the whole aspect of these often deadly diseases. Is it not possible that we are standing at the threshold of a similar development for mental illness? It only seems that the clinicians are still very reluctant to recognize and follow the genius of research, a fact not unknown in medicine.

From August 1952 until September 1956 we have been treating 505 patients with ECT; of these about 350 are elderly, mostly bed ridden patients more or less in need of general care. However, a few of them are so mentally disturbed and upsetting to the others that in spite of their advanced age, they have been receiving ECT for more than 3 years and without any exception have greatly benefited from it.

The histories of a few typical cases follow:

19620—C.P.: This patient was committed on August 30, 1948, and diagnosed chronic brain syndrome associated with cerebral arteriosclerosis with psychotic reaction. She was a very frail person refusing food, combative and resistive so that she had to be frequently in restraint or seclusion. She responded very well to a few ECT, went on convalescent leave from February to June 1949 and was returned because of a complete relapse. She responded well again to 14 ECT and went on another convalescent leave from October to December 1949. These ups and downs continued. However, she is now on a maintenance dose of ECT, about 2 treatments every 3 weeks, which avoids any relapse. She is pleasant, cooperative, in very good contact and has a good insight. She has received altogether 242 ECT. Her present age is 82.

34476—S.A.: This patient was committed on March 3, 1953, and diagnosed chronic brain syndrome with senile brain disease with psychotic reaction. She was very agitated, destructive, combative, belligerent and noisy. She improved on ECT. It is necessary to keep her on a maintenance dose of one treatment a week and in this way she is friendly, cooperative and even cheerful. She has had 142 treatments. Her present age is 88.

28846—H.E.: This patient was committed on October 9, 1951, and diagnosed chronic brain syndrome with senile brain disease with psychotic reaction. She was depressed, not eating and so feeble that the admission physician wrote "no ECT." She was also very combative and noisy at the same time. She was physically and mentally deteriorat-

ing and staff finally approved ECT. She improved after a series of 14 ECT and is holding well with 1 treatment every 2 weeks. Altogether she had 119 treatments. Her age is 83.

32941—D.M.: This patient was committed on October 23, 1952, and diagnosed chronic brain syndrome with senile brain disease with psychotic reaction. She was very depressed, refused to eat and became bed ridden. A series of ECT improved her very much and now she is on one treatment a week, able to sit up, eating well and in fair contact. Her age is 90.

The establishment of a "maintenance dose" of ECT for most of our patients has helped us to make them comfortable and not only add "years to life" but "life to years."

The patients were diagnosed as:

Chronic brain syndrome with cerebral arteriosclerosis or senile brain disease with psychotic reaction	200
Involuntal psychotic reaction	91
Schizophrenic reaction, various types	94
Manic-depressive reaction, manic or depressed type	36
Chronic brain syndrome associated with diseases of unknown or uncertain cause (Pick's and Alzheimer's Disease)	5
Chronic brain syndrome associated with convulsive disorder with psychotic reaction..	24
Psychoneurotic reactions, various types	12
Chronic brain syndrome associated with disturbance of metabolism, growth or nutrition with psychotic reaction.....	8
Chronic brain syndrome associated with alcohol intoxication with psychotic reaction	18
Chronic brain syndrome associated with central nervous system syphilis with psychotic reaction	4
Chronic brain syndrome, multiple sclerosis with psychotic reaction	6
Chronic brain syndrome with intracranial neoplasm with psychotic reaction.....	3
Mental deficiency with psychotic reaction	4
	505

The age distribution of our patients will be shown by the following table:

Under 50	50-60	60-70	70-80	80-90	Over 90	Total
57	126	190	75	51	4	505

These patients were selected from the following types of wards:

- I The most disturbed with a population of 100
- II A chronic senile ward with 111 ambulatory patients
- III A chronic senile ward with 121 patients who had to be fed on the ward because they were too feeble to go to the dining room. (Actually old people who needed general care.)
- IV Two senile bed wards with a population of 180

V An infirmary ward with about 100 elderly patients suffering from one or another organic disease.

Before we started this form of therapy we had daily to give on Ward I sedation by hypo to about 15 patients, we had to feed by spoon or tube about 20 and to keep in seclusion or restraint 8 to 10. Now all patients are able to go to the dining room; we give monthly only 2 to 3 sedations by hypo, mostly to patients who are newly admitted. There are none in seclusion or restraint. The whole atmosphere on this ward has so changed that the attendants are now able to spend their time discussing the patients' problems with them instead of being constantly on the alert against fights or destructiveness. By eliminating the very disturbing elements by means of this therapy, it has helped to improve the condition of many other patients. Many of the medical and nursing staff of this hospital have remarked about the complete change in the behavior and attitude on this once very disturbed ward.

Since August 1952 we have been able to send on convalescent leave from the Very Disturbed Ward I, 56 patients; 41 of whom had EST. Ward II, 103 patients; 46 of whom have had EST.

We feel we can be proud of this accomplishment which compares favorably with the results of active treatment wards. We were actually dealing with chronic "custodial" patients who previously were only rarely able to go on convalescent leave. This was not a "pilot study," but accomplished with the not very numerous personnel on this type of ward. We have treated to date almost 700 patients with more than 22,000 ECT. We were fortunate to have no cardiovascular or other serious complications in spite of the advanced age of most of our patients. We had about 25 fractured bones (vertebrae, hip, pelvis and forearm, in this order). During the same period on the same service we had over 178 fractures due to falls and other reasons.

Let me emphasize that in ECT as in any other form of therapy the attitude of the whole nursing staff and the physician is of utmost importance. They all must have confidence and be optimistic about this treatment and by their attitude transmit this feeling to

our patients. None of our attendants are allowed to convey the slightest impression that this treatment is a kind of punishment, or dare to threaten a patient with it. No patient is ever surprised with ECT. They are always told in advance, even if they are very disturbed, that this electric treatment will help them. Only a few remain resistive, and these actually are those who refuse any medication or fight injections with all their strength. Those who were apprehensive were sedated in the beginning until they lost their fear after realizing that we were helping them. Only 2 continue to require sedation before each session. We wish to emphasize that ECT should be given by the physician in charge of the patient and not by a special ECT team who can have only very little knowledge and contact with each individual. The close observation of our patients and the favorable results of our active therapy have intensified in us the feeling, well supported by the latest research, that ECT must produce a biochemical or other form of metabolic change in the brain. From my experience of 25 years in internal medicine, I have learned that some diseases will never be cured permanently and that certain patients are able to carry on only by getting a maintenance dose of their medication whether this is digitalis for the chronic cardiac, insulin for the diabetic or B-12 for the pernicious anemic. No doctor would ever dream of discontinuing an established maintenance dose because he would know that he might endanger the health or even the life of his patient. We felt that a similar consideration should be applied to ECT. From the moment that this idea capitivated us, we have tried to find for each of our patients her maintenance dose by closely watching her mental pattern. After a level of improvement is maintained we never wait for a complete relapse, but give the next treatment the moment we observe the slightest regression. Some patients need their treatment weekly, some every 2 weeks, some in monthly or longer intervals. In this way we have been able to maintain the improved atmosphere on the whole ward as mentioned before. The correctness of these observations is substantiated by the facts that:

a. When these established maintenance

doses were discontinued while the routine ward doctor was away, the disturbing elements broke through again.

b. Quite a number of patients who are out on convalescent leave and receive their established maintenance dose of ECT have now been out for more than 18 months; previously, they had to be returned to the hospital every 3 or 4 months because of a relapse.

SUMMARY

This paper reports:

a. The results of 4 years active therapy on custodial wards with geriatric female patients.

b. The benefit and limitation of tranquilizing drugs.

c. The value of ECT as "surgery" in psychiatry.

d. The importance of establishing a maintenance dose of ECT for each individual patient.

BIBLIOGRAPHY

1. Alexander, Franz, and Ross, Helen: *Dynamic Psychiatry*. Chicago: Univ. of Chicago Press, 1952.
2. Kalinowsky, L., and Hoch, P. H. *Shock Treatments, Psychosurgery and other Somatic Treatments in Psychiatry*, 2nd ed. New York: Grune & Stratton, 1952.
3. Alexander, Leo. *Treatment of Mental Disorder*. Philadelphia: W. B. Saunders Co., 1953.
4. Caveness, Wm. F. *Am. J. Psychiat.*, 112: 190, 1955.
5. Wolff, Gunther E., and Garrett, Franklin H. *Geriatrics*, 9: 316, 1954.
7. Funkenstein, D. H., et al. *Am. J. Psychiat.*, 106: 16, 1949.
8. Wolff, Gunther E. *J.A.M.A.*, 157: 76, 1955.
9. Wolff, Gunther E. *Am. J. Psychiat.*, 111: 748, 1955.
10. Gellhorn, Ernst. *Physiological Foundations of Neurology & Psychiatry*. Minneapolis: University of Minnesota Press, 1956.
11. Gastaut, Henri. *The Epilepsies Electro-Clinical Correlations*. Springfield, Ill.: Charles C Thomas, 1954.
12. Wolff, Gunther E. *American Practitioner and Digest of Treatment*, 7: 1791, 1956.

PSYCHOPHYSIOLOGICAL GASTROINTESTINAL REACTIONS

VINCENT EDWARD LASCARA, M.D.¹

Before discussing psychosomatic gastrointestinal symptoms, a review of the nerve innervation of the gastrointestinal tract is desirable, so that we may have a better understanding of psychosomatic G.I. symptoms.

The esophagus and stomach are supplied by the right and left vagus nerves. The liver is innervated by the left vagus. The small intestine is supplied by the vagi and the sympathetic nerves. The large intestine receives its nerve supply from the sympathetic. The pancreas is also supplied by the sympathetic nerves. The descending colon and rectum are supplied by the pelvic plexuses. The abdominal viscera receive both sensory and motor branches from the thoracolumbar division of the sympathetic and the sacral division of the parasympathetic.

There are a number of sympathetic ganglia and plexuses. Some of the plexuses are paired, namely: phrenic, suprarenal, renal; also the spermatic in the male and the ovarian in the female. Unpaired plexuses are the aortic, hepatic, splenic, superior gastric (coronary), inferior gastric, superior mesenteric and inferior mesenteric. There are several sympathetic ganglia in the abdominal cavity, largest of these are the celiacs. The lumbar ganglia are composed of 3 to 8 pairs, usually 4. Four small sacral ganglia are usually found. From this review, it is apparent why we can have various dysfunctions in the abdominal area.

The abdomen is usually known as the sounding board of the emotions. We find frequent psychophysiological reactions in the gastrointestinal tract. Not only functional disorders, but also gross organic lesions can be caused by emotional stimuli. The most prevalent functional disorders include anorexia nervosa, nervous vomiting, constipation, nervous diarrhea, nervous indigestion, irritable colon, belching, epigastric distress, "butterflies" moving inside, flatulence from fright or hurt. The disturbances of function may lead to organic lesions such as

peptic ulcer and ulcerative colitis. A difficult environment may precipitate the organic lesions. Removal to a more wholesome environment may lead to a striking improvement. The total organism may need treatment. The esophagus and colon are proximal to branches of the central division of the nervous system and are more vulnerable to the emotions.

We must remember that G.I. complaints are encountered in many neurotic and functional reactions. They are encountered in the depressed phase of manic-depressive reaction and in schizophrenic reactions. Many patients have experienced sudden cessation of nausea and vomiting once they are removed from the noxious environment or situation. Unconscious mental conflicts can cause vomiting, the patient literally cannot "stomach" the situation. It is a physical manifestation of an escape mechanism. Vomiting of bile-stained fluid may indicate abdominal migraine. We should inquire if the patient suffers from migraine headaches. Nervous diarrhea, nervous colitis, spastic colon and irritable colon are looked upon as different manifestations of the same condition. The colon is sensitive to emotions and nervous tension. Family jealousy, parental domination, marital conflicts, family insecurity, morbid fears, frustrations, business reverses, family quarrels, sudden shocking news, identification with illness or death of a member of the family or a close friend, may, by suggestion, cause functional suffering in a predisposed individual.

Gastrointestinal functional complaints are usually of long duration with much detail, related to stress, and pain tends to shift. Once the patient goes to sleep, it is uncommon to be awakened by pain: an important differential point in relation to organic pain.

Anorexia nervosa represents punishment of self or others. Attempts to gain affection may be a motive. On the other hand, martyr complex or deep seated death wishes may lead to the anorexia. Figuratively, the stomach being moronic cannot distinguish be-

¹ Address: 1200 17th St., Newport News, Va.

tween hunger for food and hunger for affection.

Cardiospasm is considered to be more than a neurosis. The nerve plexuses at the cardia may be diseased. In many cases, dilatations will relieve the symptoms. Anthral spasms may be precipitated by emotional reactions.

Peptic ulcer is an organic disorder with close relationship to the emotions. Prolonged frustrations, suppressed emotions, may aid in ulcer formation. Constant bombardment of the nervous system by the emotions may increase the reaction of hyperacidity in ulcer formation. The ulcer patient is usually rigid, a chronic worrier, overconscientious, and aims at perfectionism. For best results, diet, chemotherapy and psychosomatic measures are necessary. A patient must learn to live with the ulcer and also how to live with it.

In nervous colitis, there is no colitis inflammation of the colon. There is sensitivity to stress, anxiety and tension. A psychic strain may lead to sudden "cramps," desire to have a stool with only passage of flatus, foam and a small amount of fluid.

Ulcerative colitis is another serious disorder in which the psychiatric complaint in the etiology is preponderant. Psychic factors cannot produce actual ulcers of the "bowel." A personality study is helpful towards treatment, usually emotional conflicts exist. Besides antibiotics, sulfonamides, and at times, cortisone, management and guidance of situational reactions is essential for the best results. The colon must be removed from irritating personal problems so that it can be peaceful from these irritating factors. It

can then take care of its bacterial invaders and amelioration will be evident.

In the diagnosis and treatment of psychophysiological reactions, we must rely on:

1. A good history by systems, past history, and family and personal history. A Cornell Index questionnaire is very helpful.
2. Careful laboratory studies are essential, including X-rays, blood studies, stool research, and various metabolic evaluations. Allergic studies may be necessary.
3. A complete physical and neurological examination.
4. Psychological studies are usually helpful in evaluating personality factors.
5. Psychiatric interviews are essential.
6. Special diets are usually indicated, chemotherapy in the form of sedatives, antispasmodics, and tranquilizing drugs.
7. In severe cases, shock therapy may be indicated as an aid towards improvement.
8. Telling the patients the illness is in their mind and that they will have to get over it themselves, leaves a bad taste. These persons are ill. They need support and aid towards solving their problems, and must receive interested attention.

BIBLIOGRAPHY

1. Weiss and English. *Psychosomatic Medicine*, 2nd ed. Philadelphia: W. B. Saunders Co., 1949.
2. Arthur P. Noyes. *Modern Clinical Psychiatry*, 4th ed. Philadelphia: W. B. Saunders Co., 1953.
3. Walter A. Alvarez. *The Neuroses*, Philadelphia: W. B. Saunders Co., 1951.
4. Max Hamilton. *Psychosomatics*. New York: John Wiley, Sons, Inc., 1955.
5. Morris. *Morris Human Anatomy*, 10th ed. Philadelphia: The Blakiston Co., 1946.

CLINICAL NOTES

A PRELIMINARY REPORT ON MARSILID

FRANK J. AYD, JR., M. D.¹

Recently Marsilid (iproniazid) has been heralded as a new "psychic energizer" which elevates mood, stimulates appetite, increases weight, and restores vitality. Because of these effects Marsilid is recommended for treating mild depressions in ambulatory, non-psychotic patients and for stimulating appetite and promoting weight gain in debilitated patients. It is also suggested for hospitalized psychotics with severe depression or regressions.

Marsilid was prescribed for 14 men and 36 women (ages 22-70) who were diagnostically categorized: psychoneurosis—depressive reaction 12, hypochondriacal reaction 2, asthenic reaction 3, manic-depressive reactions—depressed 16, involutional depression 10, and schizophrenic reaction 7. Their essential complaints were weakness, lack of energy, easy fatigability, loss of interest, and feelings of dejection, insomnia, anorexia and weight loss. All patients were ambulatory.

Marsilid was administered without comment as to what it was, or the expected clinical response. Ten patients were given the drug in addition to other medication, 12 were started on an inert placebo followed by Marsilid, 15 received Marsilid alone, 13 were given Marsilid plus 5 mg. of d-amphetamine.

The usual dose for severely depressed and debilitated patients was 50 mg. 2 or 3 times daily. Mild and moderately ill patients were given 25 mg. 2 or 3 times a day. Except for those intolerant of Marsilid or who refused to take it because of side effects, all patients received the drug for more than 3 months.

Because Marsilid is a slow-acting drug,

therapeutic response did not occur before the third week of treatment. However, side effects were noted shortly after the institution of therapy. The drug had to be discontinued because some patients developed anxiety over autonomic side effects, severe postural hypotension, paranoid reaction with excitement, hypomanic psychosis, severe dyspnea, cardiac failure and enhanced depression. Common side effects were dryness of the mouth, blurred vision, constipation, delayed micturition, paresthesias and dizziness. Other patients had hyperreflexia, neuralgic pains, weakness and fatigue, itching, sweating, diarrhea, drowsiness, insomnia, and were sexually impotent. There was no positive correlation between dosage, duration of Marsilid therapy and the occurrence of side reactions. Some patients were able to tolerate 150 mg. daily, while others had serious reactions on 50 mg. a day.

The results obtained in the 39 patients who received Marsilid for 3 months were assayed by the following criteria: (1) improvement: almost complete symptomatic remission from depression and/or debilitation and (2) partial improvement: sufficient symptomatic relief to permit the patient to function more efficiently. By these standards 5 were improved, 19 partially improved, 15 were unimproved. If the 15 unimproved are combined with the 11 patients who had to be dropped because of side-effects then over half of the original patients started on Marsilid did not benefit from this drug.

Psychotherapy was an essential for patients treated with Marsilid. This drug is not always a psychic energizer. It may be a tranquilizer or a psychotomimetic drug. Although potentially useful, it should be prescribed cautiously for ambulatory patients who can be carefully supervised.

¹ Chief of Psychiatry, Franklin Square Hospital, Baltimore, Md.

TREATMENT OF PSYCHOSES WITH A COMBINATION OF PACATAL AND THORAZINE¹

MANFRED BRAUN, M.D.²

The rationale for using a combination of Pacatal and Thorazine, in the treatment of psychoses, was suggested by Hiob and Hippus(1) and by Bowes(2). The former demonstrated that the combination proved highly beneficial in treating patients who were resistant to ECT or resistant to therapy with one of the drugs alone. Furthermore, the smaller dosages employed decreased some of the common side effects. Bowes pointed out that the more pronounced parasympatholytic action of Pacatal is balanced by the more pronounced sympatholytic action of Thorazine. Moreover, Pacatal was found to be mildly euphoriant, whereas Thorazine was more sedating.

Our preliminary clinical trials with this Pacatal-Thorazine combination revealed that the outward behavior manifested by these patients offered a practical guide for estimating the initial dosage ratio employed. Therefore, we classified the 42 schizophrenics in this series into 2 categories. Group I contained 20 patients whose behavior was characteristically overactive and agitated. In contrast, the behavior of 22 patients in Group II was characteristically lethargic, withdrawn and asocial.

Taking advantage of the sedating action of Thorazine, the patients in Group I were started on a combination of Pacatal, 50 mg. b.i.d., and Thorazine, 50 mg. q.i.d. Many were adequately controlled at this dosage level. In those instances where additional sedation was required, the dosage of Thorazine was increased to 100 mg. q.i.d. and the Pacatal dosage remained at 50 mg. b.i.d. Whatever adjustments in dosage were made, the final dosage was gradually reduced to a

maintenance dose of Pacatal, 50 mg. b.i.d., and Thorazine, 50 mg. q.i.d.

Utilizing the euphoriant effect of Pacatal, patients in Group II were given Pacatal, 50 mg. q.i.d., and Thorazine, 50 mg. b.i.d. Individual patient requirements necessitated dosage changes but the maintenance dose arrived at for most patients in Group II was Pacatal, 50 mg. b.i.d., and Thorazine, 50 mg. b.i.d.

Eighty-eight per cent of the 42 patients, all of whom were schizophrenics and refractory to all other medications, demonstrated a considerable improvement. No side effects were observed and all blood studies were found to be negative. Blood pressures remained normal. A typical case history illustrates the response obtained by most patients.

Seventeen year old female. Catatonic schizophrenic with episodes of excitation and stupor. She had been hospitalized for past 2 years and during this period received all indicated therapy, including ataractic agents, without responding in a satisfactory manner. Pacatal, 50 mg. b.i.d., plus Thorazine, 50 mg. q.i.d., was then substituted for all other medication. This initial dosage was changed after a few days to Pacatal, 100 mg. b.i.d., and Thorazine, 100 mg. q.i.d. Within a few days a favorable response was noted and the dosage was gradually reduced to Pacatal, 50 mg. q.i.d., and Thorazine, 100 mg. q.i.d. The degree and type of improvement was remarkable. The prompt disappearance of the frequent episodes of excitation and stupor, characteristic of her previous behavior, represented a basic change. She spontaneously asked ward attendants to provide work and some activity. This obvious improvement in affect had never occurred before. She has now been participating in group activity for over 3 months and her outlook is good.

BIBLIOGRAPHY

1. Hiob, J., and Hippus, H.: *Med. Klin.*, 50: 1746, 1955.
2. Bowes, H. A.: *Am. J. Psychiat.*, 113: 530, (Dec.) 1956.

¹ This study was carried out at Cleveland State Hospital, Cleveland, Ohio.

² V.A. Hospital, 130 West Kingsbridge Rd., Bronx 68, N. Y.

THE USE OF HEXAFLUORODIETHYL ETHER (INDOKLON) AS AN INHALANT CONVULSANT

AUGUSTO ESQUIBEL,¹ JOHN C. KRANTZ, JR.,² EDWARD B. TRUITT,³ AND
ALBERT A. KURLAND⁴

Although hexafluorodiethyl ether ($\text{CF}_3\text{CH}_2\text{OCH}_2\text{CF}_3$) was originally synthesized for the purpose of determining whether it possessed anesthetic properties, it was found that the inhalation of its vapors produced convulsive seizures in many species of laboratory animals.

This drug is now being investigated concerning its usefulness as a convulsant in the treatment of hospitalized psychiatric patients. To date a total of 434 treatments have been administered to a group of 40 patients. The only complication so far observed has been a compression fracture of a thoracic vertebra. Routine laboratory studies of blood, urine, and liver function as well as EKG studies have disclosed no abnormalities.

The procedure for administering the drug is through the use of a Stephenson mask modified appropriately with one way valve to which the Indoklon vaporizer can be attached and the exhaled vapor absorbed by an activated charcoal exhalant (1). The dosage used varies according to the individual but remains within the range of 0.3 cc. to 1.5 cc. Treatments were given three times a week, and each patient received, on the average, 12 treatments.

The time required to induce convulsions varies with each individual treatment, but has averaged about 30 seconds. The seizure begins with a few premonitory myoclonic jerks which are followed by the onset of a tonic phase without the marked "jack-knif-

ing" effect so characteristic of the onset of electroconvulsive therapy. There also seems to be less apnea associated with this treatment than with electroconvulsive therapy, and less confusion and psychomotor activity in the immediate post-convulsive period.

Subjectively, a great many of the patients who have experienced this procedure and who have had electroconvulsive therapy in the past, while not feeling enthusiastic about either treatment seem to feel less threatened by the convulsive inhalant. In those patients who have developed an intense apprehension to electroconvulsive therapy, this offers an alternate choice which is more acceptable to the patient. Whether this type of treatment brings about the degree of post-convulsive amnesia and confusion as that produced by electroconvulsive therapy is being investigated by means of psychological studies but as yet sufficient data are not available to make any statements.

ACKNOWLEDGMENTS

This research was made possible by a grant from the Ohio Chemical and Surgical Equipment Company and the support of Friends of Psychiatric Research, Inc. With great appreciation acknowledgment is made of the administrative and clinical support by Dr. Isadore Tuerk, Superintendent, and Dr. Charles Ward, Clinical Director, Spring Grove State Hospital.

BIBLIOGRAPHY

1. Krantz, J. C., Jr., Esquibel, A., Truitt, E. B., Jr., Ling, A. S. C., and Kurland, A. A. Hexafluorodiethyl Ether (Indoklon) an Inhalant Convulsant—its Use in Psychiatric Treatment. (in press)

¹ Senior Psychiatrist, Spring Grove State Hospital, Catonsville, Md.

² Professor of Pharmacology, University of Maryland School of Medicine, Baltimore, Md.

³ Associate Professor of Pharmacology, University of Maryland School of Medicine, Baltimore, Md.

⁴ Director of Medical Research, Spring Grove State Hospital, Catonsville, Md.

CASE REPORTS

A CASE OF AGRANULOCYTOSIS FOLLOWING "SPARINE" ADMINISTRATION

MELVIN J. REINHART, M.D.,¹ BERNARD S. SILVERSTEIN, M.D.,² AND
THOMAS N. CROSS, M.D.¹

Since few cases of agranulocytosis have been noted following Sparine administration, it seemed wise to us to report the following case.

M. S., a 49-year-old male, was admitted to the Neuropsychiatric Institute May 25, 1957. A diagnosis of schizophrenic reaction, undifferentiated type, chronic, was made at the time of admission. In 1949 and 1955 a similar diagnosis was made on admission to a state hospital. He received electroconvulsive therapy on both occasions. Following the ECT in 1955, the patient was placed on Thorazine beginning with a dosage of 25 mg. t.i.d. which was increased to 100 mg. t.i.d. 4 days later. After about a month he developed clay-colored stools, icteric sclerae, low-grade temperature, and a generalized pruritis. His serum bilirubin was 4.5. Urinalysis showed a trace of albumen and a positive test for bile pigment. The hemoglobin was 16.6 grams and the white blood cell count was 6,650 with a normal differential (polymorphonuclears 70%, lymphocytes 23%, monocytes 6%, basophils 1%). The thymol turbidity was 1.6 units. According to history, the patient's symptomatology cleared spontaneously following the withdrawal of the drug.

On admission to the Neuropsychiatric Institute, 2 years later, the patient was placed on 50 mg. of Sparine q.i.d. The next day the dosage was increased to 100 mg. q.i.d. and 2 days after admission Ritalin, 10 mg. t.i.d. was added to combat an increasing depression. Sparine and Ritalin were continued at these dosages for 6 days, until June 4, when because of progressive agitation the Ritalin was discontinued and the Sparine

was increased to 250 mg. q.i.d. Because of increasing lethargy the Sparine was decreased to 150 mg. q.i.d. on June 10.

The admission physical examination revealed no abnormalities. As there was a history of subtotal thyroidectomy in 1942, thyroid studies were initiated May 29. A BMR was plus 22% and serum cholesterol 126 mg. %. Hemoglobin was 14.9 grams or 95% and the white blood cell count was 5,700. Urinalysis and chest film were negative.

Because of pitting edema of the lower extremities, exertional dyspnea, and increasing fatigue the patient was felt by the medical consultant on June 10 to have arteriosclerotic heart disease with hyperthyroidism. Digitalis and thimerin were administered on June 11. The next day a PBI was reported as 11.3 gamma % with inorganic iodine 1.8 gamma %. His temperature on June 12 was 102.6° orally with a pulse rate of 120. An electrocardiogram revealed only sinus tachycardia. It was felt by the consultant that the diagnosis at that time was "thyrotoxicosis with a question of borderline thyroid storm."

A CBC done at the time of transfer to internal medicine June 12 revealed a white blood cell count of 2,700 with a differential of 90% lymphocytes and 10% monocytes—no granulocytes were seen. Although Sparine was immediately discontinued, the patient's temperature rose to 104° rectally, occasionally spiking to 105.6°. The febrile course continued despite massive doses of antibiotics.

On June 13 the total serum bilirubin was 2.3 mg. % with a BSP retention of 38%. With a progressive jaundice the white blood cell count dropped to 550 on June 20.

A bone marrow examination June 13 revealed "megakaryocytes are present in normal numbers forming platelets. There is no

¹From the Neuropsychiatric Institute, Ann Arbor, Michigan.

²From the Department of Internal Medicine, University Hospital, Ann Arbor, Michigan.

evidence of granulopoiesis. Erythropoiesis is normoblastic with some cells showing rather clumped chromatin patterns. Plasma cells are numerous, most mature in appearance but some show nucleoli and have light blue vacuolated cytoplasm. An occasional reticulum cell is seen. Mast cells are not seen."³ This was interpreted to represent a more severe bone marrow damage than the maturational arrest usually seen in agranulocytosis.

On June 22 the temperature dropped to normal levels and remained there for several days. The white blood cell count on June 25 was 22,600 with 82% granulocytes on differential (blastocytes 1%, progranulocytes 6%, myelocytes 7%, metamyelocytes 8%, bands 22%, segs 38%). His physical condition improved markedly. The jaundice

cleared entirely by June 28. Subsequently the patient encountered complications including a septicemia and a bronchopleural fistula and at the time of this writing is on the critical list.

This is the only case of agranulocytosis following Sparine administration observed at our institute. Unlike the few previously reported cases there was a lapse of 12 days following the discovery of agranulocytosis before evidence of granulopoiesis was noted.

In view of this experience and the reports of hematologic evidences of toxicity with other phenothiazine derivatives we have begun a program of weekly WBC for one month on all patients starting on these drugs. The following month fortnightly checks are made. It is also essential to carefully evaluate the symptomatology of all patients on these drugs in order to detect early evidence of toxicity since the WBC can change precipitously from day to day.

³ Bone marrow report courtesy of Dr. Ronald C. Bishop, University Hospital, Ann Arbor, Michigan.

"PARADOXICAL" EFFECT OF CHLORPROMAZINE IN A CASE OF PERIODIC CATATONIA

WALTER KRUSE, M.D.²

A small number of schizophrenic patients, when placed on chlorpromazine, show increasing restlessness, agitation, and outbursts of aggressive behavior. This is not a transitory effect comparable to the "turbulent phase" in reserpine patients but it continues as long as chlorpromazine is given. A similar "paradoxical" effect was observed in the following case of periodic catatonia.

Our patient is a 50 year old white male whose mental illness began when he was 30. He was restless, excited and had auditory hallucinations. He made a fair recovery, but 6 years later he became ill again, and since then he has suffered periodic psychotic episodes, always characterized by excitement, extreme psychomotor activity, personality disintegration, disordered thinking, auditory hallucinations and delusional ideas. The phases of excitement began with the appearance of tension, restlessness, abnormal irritability, flushing of the face, and insomnia. At the end of each phase he would sleep for 1 or 2 days. During the "free"

interval he was able to work in the hospital and did not show any gross psychotic symptoms. From 1953 to 1955 exact records were kept, and the total of excited periods amounted to 32% while the "free" intervals were 68%. The duration of excited phases was most often 2 to 3 weeks, that of the "free" intervals usually between 3 and 6 weeks.

In November, 1955, he received a combined medication of up to 400 mg. chlorpromazine plus 4 mg. reserpine daily, for the following 6 months chlorpromazine only. The average daily dose was 150 mg. i.m. or 300 mg. p.o. During this period of treatment our patient's condition deteriorated markedly. The excited phases became longer and followed upon each other in rapid succession. They reached a degree of utmost severity. There were only 104 days of "free" interval and 115 days of excitement. (Following this 7 month period chlorpromazine was discontinued and Ext. Thyroid was given with immediate beneficial results.)

In trying to explain the "paradoxical" effect of chlorpromazine, Selbach's "principle of the regulatory circle"⁽¹⁾ has proved helpful. Autonomic centers in the diencephalon seem to play the central role in the periodic changes of this rare type of catatonia. A shift in the balance existing between the centers of the ergotropic (sym-

¹ This study was made at the Vermont State Hospital. I should like to express my gratitude to Dr. R. A. Chittick, Superintendent of the Vermont State Hospital, for his helpful suggestions.

² Address: Box 50, Hathorne, Mass.

pathetico-adrenal) and trophotropic (vago-insulin) systems is accompanied by a change in the clinical picture. Gjessing and other workers in this field agree that in the "free" interval there is a shift in the balance toward the trophotropic side. The phase of excitement, according to Selbach's principle, would then represent a secondary compensatory ergotropic reaction, an adjustment mechanism to counteract the maximal trophotropy. At the end of the excited period there is a lytic return to the equilibrium via the sleep phase. In considering the essentially trophotropic action of chlorpromazine, the "paradoxical" effect in our patient seems not surprising.

Chlorpromazine medication during the "free" interval led to an increased trophotropy in our already trophotropic patient and aggravated the existing disturbance of the autonomic centers. The maximum trophotropy was reached in a shorter time, thus reducing the "free" interval. The resulting compensatory ergotropic adjustment reaction (excited phase) could then be expected to be of a more severe nature.

BIBLIOGRAPHY

1. Selbach, H. Die cerebralen Anfallsleiden. Handbuch der Inneren Medizin. V/3. Berlin: Springer, 1953.

AGRANULOCYTOSIS DURING TREATMENT WITH METHYLPROMAZINE¹

PAUL E. FELDMAN, M.D. AND JEROME STATMAN, M.D.²

Reports of agranulocytosis as a complication of phenothiazine therapy are appearing with increasing frequency. A review of the current literature indicates that this untoward effect of therapy may be more common than the often quoted incidence of 1:50,000-100,000(1). It is impracticable with the available data to attempt to estimate the number of cases of agranulocytosis which may have occurred. Individual reports have listed an incidence as high as 1:700(2) or 1:400(3). Pollack(4) in his review of the literature quotes an incidence as high as 1:150.

Pooling all data, it appears that the average patient who develops agranulocytosis during the course of phenothiazine therapy may be a female in her late 50's who has been treated for approximately 6 weeks prior to the onset of symptoms. Her chances of surviving this complication are 2 out of 3.

The medical regime for the management of agranulocytosis has been fairly well standardized, and with minor exceptions, is the same throughout the country. It consists of:

1. Immediate cessation of phenothiazine therapy.

2. Massive doses of antibiotics.

3. Non-specific supportive measures (pentonucleotides, parenteral fluids and liver extracts).

4. Symptomatic medication.

The use of steroids is of questionable benefit. Although agranulocytosis is thought to be an allergic phenomenon and steroids are known to stimulate the release of neutrophils if the precursors are present in the bone marrow, steroids suppress the connective tissue reaction and this is of great importance when there is an absence of granulocytes. The transfusion of whole blood has been accompanied by a higher than average mortality and this treatment has therefore fallen into disfavor.

The following case is reported not because the incidence, treatment or symptomatology was unique but because this is the first reported case of agranulocytosis occurring during treatment with a new phenothiazine compound.

Case Report.—Seventy-seven-year-old, white male. **Diagnosis.**—Chronic brain syndrome associated with cerebral arteriosclerosis with mild congestive failure secondary to arteriosclerotic heart disease. Routine laboratory studies were within normal limits.

Shortly after admission, treatment was started with Methylpromazine, 25 mgm t.i.d. and 25 days later the dosage was increased to 50 mgm t.i.d. On the 45th day the dosage was again increased to 75

¹ 10-(3 dimethylaminopropyl)-2-methyl phenothiazine hydrochloride.

² Topeka State Hospital, Topeka, Kansas.

mgm t.i.d. On the 51st day of treatment the patient appeared ill, temperature 101.6 (R) and had slight pharyngeal injection and gingivitis. X-ray revealed minimal bronchopneumonia in the left base and a throat swab grew alpha streptococci (viridans). W.B.C. was 2,800 with 1% eosinophiles and 99% lymphocytes.

Methylpromazine was discontinued and patient was placed upon a treatment regime which included 1,600,000 units of penicillin and one ampule of Combiotic daily. This regime was continued for 14 days. On the 3rd day the W.B.C. was 950 with 100% lymphocytes following which there occurred a gradual and progressive increase so that by the 15th day the W.B.C. was 6,500 with 74% segs, 25% lymphocytes and 1% monocytes. Recovery was uneventful.

In keeping with the policy (5) of considering all fevers of undetermined origin as possible cases of agranulocytosis until proven otherwise (when they occur during

the course of phenothiazine therapy), an early diagnosis of agranulocytosis and a favorable result from treatment was possible.

BIBLIOGRAPHY

1. Hussar, A. E.: *Gen. Prac.*, 15: 5, May 1957.
2. Schick, G., and Virks, J.: *New Eng. J. Med.*, 255: 798, Oct. 25, 1956.
3. Tillim, S. J.: *Am. J. Psychiat.*, 112: 1028, June 1956.
4. Pollack, B.: *Am. J. Psychiat.*, 113: 557, Dec. 1956.
5. Feldman, P. E., et al.: *Am. J. Psychiat.*, 113: 842, Mar. 1957.

Complete Clinical history of this case including laboratory data and treatment schedule as well as an abstracted bibliography of the current literature regarding phenothiazine agranulocytosis available upon request. Please direct inquiries to Dr. Paul E. Feldman, Director of Research and Education, Topeka State Hospital, Topeka, Kansas.

EQUITY

I have no special regard for Satan, but I can at least claim that I have no prejudice against him. It may even be that I have been a little in his favor, on account of his not having a fair show. All religions issue Bibles against him, but we never hear his side. We have none but the evidence for the prosecution, and yet we have rendered the verdict. To my mind this is irregular. It is un-English, it is un-American.

Of course, Satan has some kind of a case, it goes without saying. It may be a poor one, but that is nothing; that can be said about any of us. As soon as I can get at the facts I will undertake his rehabilitation myself, if I can find an impolite publisher. It is a thing which we ought to do for anybody who is under a cloud.

We may not pay him reverence, for that would be indiscreet, but we can at least respect his talents. A person who has for untold centuries maintained the imposing position of spiritual head of four-fifths of the human race, and political head of the whole of it, must be granted the possession of executive abilities of the loftiest order. In his large presence the other popes and politicians shrink to midgets for the microscope. I would like to see him. I would rather see him and shake him by the tail than any other member of the European Concert.

—MARK TWAIN

COMMENT

ON THE OCCASION OF ERWIN STRANSKY'S 80TH BIRTHDAY

Erwin Stransky was born in Vienna on July 3, 1877, and received the degree of Doctor of Medicine from that city's university in 1900. The following year he joined the First Psychiatric Clinic in Vienna under Wagner-Jauregg and worked there as clinical assistant for 7 years. Thereafter he gave up his position but remained in close contact with the clinic as "Alter Herr." In 1906 he was appointed to the permanent position of expert consultant in psychiatry and neurology to the court of law in Vienna. He became "Privat-Dozent" in 1908, was appointed director of a workers' insurance clinic in 1911, and associate professor of psychiatry and neurology at the University of Vienna in 1915. His teacher, Wagner-Jauregg, suggested his appointment to full professorship 4 times, but the political situation in Austria interfered. Stransky was forced into temporary retirement for 7 years. In May, 1945 Stransky was made director of the Municipal Institute for Nervous Diseases, Rosenhügel, because he had reached the age of retirement.

It is difficult to describe Stransky's work completely. It comprised nearly all fields of psychiatry, neurology, medical psychology, psychotherapy and mental hygiene. Stransky published 257 scientific papers among them 13 monographs, some of which were textbooks and articles in handbooks. His first papers were rather of experimental histological and neurological nature. He described several staining methods, published several papers on discontinuous degeneration in peripheral nerves and an original paper on associated nystagmus. Later, his neurological papers dealt with the diseases of the peripheral nerves, particularly neuritis to which his attention had been drawn by his experiences in the military service during World War I. Shortly before World War II, Stransky introduced a new treatment for multiple sclerosis, namely heterohemotherapy (*Fremdblutbehandlung*) which since has found general recognition. He described his own experi-

ences with this form of treatment in 11 papers.

Stransky first began to concern himself with the problem of schizophrenia, at that time still called *dementia praecox*, in the paper he wrote on the occasion of his appointment as "Privat-Dozent," and he never disassociated himself from this field of research which was of special interest to him. In this paper he pointed to the disassociation of the thymopsyche from the noopsyche as the essential characteristic of the schizophrenic disorder. He called this disassociation "intrap-sychic ataxia," and ably defended his view on the schizophrenic process against such authorities as Bleuler and Kraepelin. It may be mentioned that in 1932 Stransky described the case of a catatonic patient who suffered a fatal accident by an electric current. The patient showed a temporary remission of his psychosis before his death and Stransky saw in this fact an indication for a possible therapy of schizophrenia, thus anticipating electroshock treatment.

Stransky published 6 papers, some of which were monographs, on manic-depressive psychosis and 15 on problems of forensic psychiatry and in these papers introduced the concept of the "initial offense." Throughout his whole scientific life Stransky has been very interested in all problems of mental hygiene, psychotherapy and neurosis, frequently expressing views quite different from those of Freud. Fifty-seven papers, some of them monographs, contain his ideas and experiences in this field. He was the first to publish a textbook on mental health in German and he became an ardent protagonist of this movement in Austria. The inauguration of applied psychopathology is also to his merit.

In 1945, after 7 years of humiliation, Stransky was able to resume his work in and for the public. He did not miss any scientific meeting or convention in the broad field of neurology and psychiatry, attending many conventions abroad, frequently as of-

ficial representative of Austria, whose interests he upheld as a scientist and a dignified human being. Stransky is the only Austrian who is an Honorary Member of The American Psychiatric Association. He is also honorary president of a number of scientific societies in Austria, and honorary or corresponding member of various scientific associations abroad. Despite his advanced age,

which can hardly be guessed from his appearance, Stransky is active both scientifically and as a practicing neurologist and psychiatric expert. He enjoys the greatest admiration and esteem of the physicians of his homeland because of his witty and spirited lectures and quick repartee.

H. REISNER,
Vienna.

CHEMICAL CONCEPTS OF PSYCHOSIS

At the International Congress of Psychiatry in Zurich, Sept. 1957, a symposium, with Dr. Max Rinkel of the Mass. Mental Health Center as chairman, was held on "Chemical Concepts of Psychosis." A distinguished group representing many nations and scientific fields including biochemistry, physiology, pharmacology, psychology and psychiatry discussed the topic. The papers and discussion brought forth many new and critical observations on the progress of investigations on the psychological effects of newer chemicals. A highlight of the program was a message from Dr. Carl G. Jung, Honorary President of the symposium, which reads as follows:

"Please convey my sincerest thanks to the opening session of your Society. I consider it a great honour to be nominated as Honorary President, although my approach to the chemical solution of problems presented by cases of schizophrenia is not the same as yours, since I envisage schizophrenia from the psychological point of view. But it was

just my psychological approach that had led me to the hypothesis of a chemical factor, without which I would not be able to explain certain pathognomonic details in its symptomatology. I arrived at the chemical hypothesis by a process of psychological elimination rather than by specifically chemical research. It is therefore with my greatest interest, that I welcome your chemical attempts. To make myself clear, I consider the aetiology of schizophrenia to be a dual one, namely, up to a certain extent, psychology is indispensable to explain the nature and the causes of the initial emotions, which give rise to metabolic alterations. These emotions seem to be accompanied by chemical processes causing specific temporary or chronic disturbances or destructions."

All the members agreed that the meeting had been highly successful, assuring further marked progress in this field of experimental psychiatry.

MAX RINKEL, M. D.,
Mass. Mental Health Center.

THE SECOND INTERNATIONAL CONGRESS OF PSYCHIATRY ZURICH, SEPTEMBER 1-7, 1957

The sense and the aim of any congress is to *congregere*, that means to get together. This sense and this aim were splendidly realized in Zurich. In a truly cosmopolitan city there are many preconditions making the sojourn of visitors pleasant. I need only to refer to the multilinguality of the Swiss that makes it easy for everybody to enjoy their hospitality, and particularly, in a place like Zurich to fall into the rhythm of a beautiful city.

Our Swiss hosts would have been willing to transcend themselves in order to do justice to their guests if such transcendence would have been necessary outside of one or the other scientific discourse. They had prepared a program and other printed material—quite a bit of it, indeed, including a psychiatric issue of the *Journal Suisse de Medecine*—that facilitated orientation in time and space as far as possible. There were numerous big and small classrooms in

the University of Zurich and in the Federal Institute of Technology. There were guides and helpers everywhere and there was even plenty of parking space provided.

Heart and soul of the organization of the congress were Manfred Bleuler and his staff. Manfred Bleuler was, I daresay, the soul of the whole, although he had to move around on a cast due to a malleolar fracture that he had suffered recently. He crowned his work with the speech he gave after the Congress Dinner on Wednesday, September 4. In this speech the topic was not psychiatry but Zurich and its history. Manfred Bleuler put his whole heart into it showing his dedication to his task and his profound love for his home city.

In the scientific programm the biological and the philosophical (geisteswissenschaftliche) approach in psychiatry came to rather full expression. As regards treatment, somatic methods as well as psychotherapy had field days. Special and ethnological problems were presented too. "The Present Status of our Knowledge about the Group of Schizophrenias" was demonstrated in papers and in symposia. There were not any new discoveries revealed. There were also several exhibits but I will not go into detail.

Congress languages for the about 2500 participants coming from 57 countries were German, French, English, Spanish and Italian. It repeatedly happened that a speaker had to read his paper two or three times, everytime in another language. Manfred Bleuler, for instance, read his paper, "Aims and Topics of our Congress," on Sunday in the forenoon in French, in the afternoon in English, and on Friday morning in German.

There were almost exclusively prepared discussions, mostly read from a script by the discussants. This, in my opinion, is regrettable as it impeded spontaneous remarks.

The time factor may have played a role here. However, if before the definite formulation of the programm a goodly number of superfluous papers would have been eliminated, time enough would have been available. It occurs to me also that an International Congress should not be the exercising ground for inexperienced and boring speakers. Some criticism and selfcriticism in these respects would be very desirable.

At the meetings on Sunday the Zurich Chamber Orchestra made lovely music. Twice in the evening a serenade was performed by the Winterthur String Quartetté. A memorial plaque to Adolf Meyer was donated to the University Psychiatric Clinic Burghoelzli.

On Sunday afternoon the French psychiatrists Jean Delay and Henri Ey and our own Oskar Diethelm were appointed honorary doctors of medicine by the Medical Faculty of the University of Zurich.

Needless to say the work of Eugen Bleuler found full appreciation at a great number of opportunities.

Erwin H. Ackerknecht published a timely *Short History of Psychiatry* * from which I translate:

The great men (sc. in history) were only possible because other men worked with and before them. If there had not been a Pinel, a Kraepelin, or a Freud, other men would have accomplished their work with more or less splendor. This does not exclude the fact that these great men are the best representatives of the psychiatry of their time; hence they must be more intensively studied than is possible in a short survey.

Let us hope and pray that another Pinel or another Kraepelin or another Freud may be given to psychiatry before long.

EUGEN KAHN, M. D.,
Houston, Tex.

* *Kurse Geschichte der Psychiatrie*. Stuttgart: Ferdinand Enke. 1957, IX, 99 pp.

OFFICIAL NOTICES

TREATMENT OF ACUTE EMOTIONAL DISORDERS UNDER THE DEPENDENTS' MEDICAL CARE PROGRAM FOR DEPENDENTS OF MEMBERS OF THE UNIFORMED SERVICES

Since medical care of dependents of uniformed services personnel in civilian medical facilities began December 7, 1956, as authorized by Public Law 569, 84th Congress, it has been noted that the authorization for hospitalization of acute emergencies classified as acute emotional disorders needs to be better understood.

Treatment of nervous and mental disorders is not authorized under the provisions of the Dependents' Medical Care Act, Public Law 569, 84th Congress, except in special and unusual cases (see Sec. 103(g)(2) and Sec. 204).

The authority given to make exceptions for hospitalization of patients for nervous and mental disorders in uniformed services medical facilities requires some explanation. The Surgeon General of the respective uniformed service is authorized to treat dependents with acute emotional disorders in uniformed services facilities and to transfer eligible dependents from civilian to uniformed services facilities for treatment of such disorders. However, few beds are available for women and children in uniformed services facilities for the treatment of nervous and mental disorders. In general, they are sufficient only for female uniformed service members and for dependents having N-P disorders who are evacuated from outside continental United States.

The need to provide civilian facilities for cases of acute emergency, including acute emotional disorders was met by the Joint Directive; "Hospitalization is authorized at Government expense for such emergencies only pending completion of arrangements for care elsewhere" unless the illness qualifies for hospitalization under another provision of the law, such as pregnancy. This is interpreted to mean that the Government is liable for payment of the hospital and physician's

bills only: a. until the acute emotional disturbance subsides; or b. until the sponsor can arrange for care at other than Government expense, whichever is earlier.

The judgment and integrity of the attending physician must be relied upon to determine when the acute emotional disturbance subsides, also the probable duration of hospitalization required, and his word will be unquestioned, unless there is evidence to the contrary.

For a practical working arrangement, Fiscal Administrators may handle many cases without referral to the Office for Dependents' Medical Care. Bills may be paid without further reference: a. if the physician states the condition was one of acute emotional disorder constituting an emergency requiring hospitalization for the life, health or well being of the patient, regardless of psychiatric diagnosis; and b. if the duration of hospitalization did not exceed 21 days.

When the Government's liability terminates not later than 21 days, the DA Form 1863 for the physician and hospital should show the type of disposition which has been made. This will aid contractors in making prompt payments.

Extension of medical care beyond 21 days at Government expense may be granted only by the Contracting Officer, Office for Dependent's Medical Care for short periods, for the following reasons:

(1) When there is necessity for more time for the sponsor to assume responsibility. Examples: (a) Sponsor's return from overseas station, sea duty, etc.; (b) Difficulty in obtaining agreement of state or municipal institution to accept patient.

(2) When retention in the hospital for two or three weeks will result in a cure or remission which will permit patient to return home.

(3) When diagnosis for determination of length of care cannot be made within the 21-day period.

A suggested procedure for requesting an extension of hospitalization beyond 21 days follows:

(1) Upon admission of a patient under the Dependents' Medical Care Program, the hospital administrator should immediately contact the charge physician to ascertain the length of time hospitalization will be required for the acute emergency.

(2) If the attending physician is of the opinion that hospitalization will be required beyond a 21-day period, the hospital administrator should immediately prepare a report containing information specified in subparagraph (3) below and forward to the Contractor (Blue Cross or Mutual of Omaha, whichever is applicable). Because of the shortness of time, this report should always be submitted by the end of the first 7 days of hospitalization and should be forwarded by air mail by all echelons, if more expeditious.

(3) The report will be clinical and will show the name of the dependent, date of admission, diagnosis, prognosis, service member's name, serial number, branch of service, the physician's name, and the length of time for which extension of hospitalization at Government expense is requested with reasons therefor.

In cases when extensions of time beyond 21 days are granted by the Contracting Officer, the DA Forms 1863 submitted by the hospital and physician must have attached thereto a copy of the Contracting Officer's authorization.

Procrastination and delay on the part of an available sponsor to arrange for care of the patient at other than Government expense will in no case be considered reason for extension of the 21-day period.

On receipt of request for extension of medical care beyond 21 days, the Contracting Officer will determine if facilities are available for further care in uniformed services facilities and if so, will notify the contractor. If an extension of time is not justified or uniformed services facilities are not available, the Contracting Officer will notify the contractor of the date when the Government's liability for payment did or will terminate.

Physicians accepting patients with acute emotional disorders under the Dependents' Medical Care Program have the great responsibility of making recommendations which are compatible with the Law governing the Program. They must determine that the acute emotional disorder is one which constitutes an acute emergency and that hospitalization is necessary for the life, health or well being of the patient. They should institute treatment as indicated and at the same time begin discussions with the sponsor which will lead to the proper treatment and care of the patient at other than Government expense.

PAUL J. ROBINSON,
Major General, M. C.
Executive Director,
Office for Dependent's
Medical Care.

HAPPINESS

Happiness in this world, when it comes, comes incidentally. Make it the object of pursuit and it leads us a wild-goose chase, and is never attained. Follow some other object, and very possibly we may find that we have caught happiness without dreaming of it; but likely enough it is gone the moment we say to ourselves, "Here it is!" like the chest of gold the treasure-seekers find.

—NATHANIEL HAWTHORNE

NEWS AND NOTES

PSYCHOPHARMACOLOGY SERVICE CENTER, N.I.M.H.—A clearinghouse of information on psychopharmacology is being established by the Psychopharmacology Service Center of the National Institute of Mental Health. An extensive collection of the literature in this field, including pharmacological, clinical, behavioral, and experimental studies of the ataraxic, psychotomimetic, and other centrally acting drugs, will be classified and coded to enable the staff to answer a wide variety of technical and scientific questions. As soon as enough materials have been assembled the Center plans to offer bibliographic and reference service as well as the preparation of critical and analytic reviews of special topics in the field.

In order to accelerate the growth of the literature collection the Center invites persons working in this field to provide 3 copies of any papers that deal with their work—whether reprints, pre-publication manuscripts, progress reports, informal mimeographed reports, papers read at meetings, or abstracts. Letters outlining work in progress would also be welcome. Any restrictions that authors may wish to place on the Center's use of their papers will be strictly observed. All materials should be addressed to the Technical Information Unit, Psychopharmacology Service Center, National Institute of Mental Health, 8719 Colesville Road, Silver Spring, Md.

WESTERN DIVISIONAL MEETING, A.P.A.—The 4-day meeting of the Western Division of The American Psychiatric Association, in conjunction with the West Coast Psychoanalytic Societies, will be held in Los Angeles, Cal., November 20-24, 1957. More than 2,000 physicians from the Western United States and Canada are expected to attend.

Papers to be presented will be grouped in the following categories: Group Psychotherapy, Experimental Psychiatry, Psycho-

somatic Medicine, Hospitals, Drugs, Individual Psychotherapy, Social Psychiatry, Child Psychiatry, and Psychoanalytic Papers.

Delivering the Academic Lecture, November 23, will be Ralph W. Gerard, M. D., Ph. D., Professor of Neurophysiology at the University of Michigan School of Medicine. Other guest speakers: Franz Alexander, M. D., Los Angeles; Sydney Margolin, M. D. and René Spitz, M. D., Denver, and author Aldous Huxley.

For further information contact Robert A. Solow, M. D., 427 North Camden Drive, Beverly Hills, Cal.

FINANCIAL AID TO MENTAL HEALTH STUDENTS.—The staff of the Southern Regional Education Board has compiled a brochure listing grants, fellowships, stipends and scholarships available in the South for training in the mental health professions: psychiatric social work, psychiatric nursing, psychiatry and clinical psychology. The material was secured from institutions and agencies in the 16 states included in the Southern Regional Education Compact. It lists 1,042 such grants amounting to \$2,653,700 per year in all the disciplines.

Copies of the brochure may be obtained on request from: Southern Regional Education Board, 881 Peachtree St., N.E., Atlanta 9, Ga.

AMERICAN OCCUPATIONAL THERAPY ASSOCIATION.—The Association celebrated its 40th anniversary with the Annual National Institute Conference held October 21-25 in Cleveland, Ohio. Occupational therapists from all over the United States participated in the program.

Emphasis was placed on group techniques and the occupational therapist's role in the therapeutic situation. A panel, consisting of representatives from several allied profes-

sions, as well as occupational therapy, discussed the evaluation of the patient.

The opening address was given by Henrietta McNary, O.T.R., Director of Occupational Therapy, Milwaukee-Downer College. Louis Seltzer, Editor of the Cleveland Press, was speaker at the banquet.

5TH INTERNATIONAL CONGRESS OF INTERNAL MEDICINE.—The 5th Congress of the International Society of Internal Medicine will be held in Philadelphia, April 23-26, 1958. Those physicians in North and South America who wish to become members of the International Society and to attend the Congress should request application forms from E. R. Loveland, Secretary-general of the 5th Congress, 4220 Pine St., Philadelphia 4, Pa. Dues are \$5.00 for a 2-year period. Physicians in other countries should write to Professor H. Ludwig, 2, Med. Aberlung Burgospital, Basel, Switzerland.

Anyone who wishes to participate in the program should send the title of his paper and a 200 word abstract, in triplicate, to Dr. Frank N. Allan, 605 Commonwealth Ave., Boston 15, Mass.

AMERICAN PUBLIC HEALTH ASSOCIATION, INC.—The Association is initiating a long-range technical development program to provide leadership and guidance to governmental and voluntary agencies, in the health problems of the nuclear age. "In some important areas of public health," states Dr. Reginald M. Atwater, executive secretary, "methods and standards have remained virtually unchanged since the horse-and-buggy era."

Initial concentration will be in 8 areas: radiological health, accident prevention, mental health, chronic disease and rehabilitation, child health, environmental health, medical care administration and public health administration.

To coordinate the program, a technical development board has been appointed. Chairman is Dr. Martha M. Elliot, former chief of the U.S. Children's Bureau and now professor of maternal and child health at the Harvard School of Public Health, Boston.

The present program is the first step in a

3-year expansion and reorganization program for the 85-year-old professional society. The Rockefeller Foundation has made a grant of \$150,000 to help finance the new activities.

Among listed priority health needs is the maintaining of a full attack on the major unsolved health problems: cardiovascular diseases, mental diseases, crippling and handicapping conditions, cancer, dental diseases, diabetes and alcoholism.

The American Public Health Association is the largest professional organization of public health workers in the Western Hemisphere, its 13,000 members including physicians, nurses, dentists, veterinarians, engineers, sanitarians, statisticians, nutritionists, biologists, health educators, institutional administrators and other specialists on staffs of governmental and voluntary agencies.

Headquarters of the Association: 1790 Broadway, New York City.

President: Dr. John W. Knutson, assistant surgeon general and chief dental officer, U.S. Public Health Service.

BIBLIOGRAPHY OF MEDICAL REVIEWS, VOL. 2.—Thirteen months after the publication of the experimental Bibliography of Medical Reviews, 1955, volume 2 appeared in August. The Bibliography will be continued as a regular annual publication of the National Library of Medicine.

Complete entries including the bibliographic reference and translation of foreign titles, appear under the various subject headings, with plentiful cross references. This issue contains about 1800 review articles, all material being culled from journals indexed in the Current List of Medical Literature.

Copies are available from the Superintendent of Documents, Government Printing Office, Washington 25, D.C., at 60¢ per copy.

DR. WARNER HEADS CRAIG COLONY.—Dr. George L. Warner, assistant director of Marcy (New York) State Hospital, has been appointed director of Craig Colony, state hospital for epileptics in Sonyea, N.Y., and assumed his new duties September 26, 1957. He succeeds Dr. William C. Johnston, who

has returned to his former post in the Department of Correction.

Dr. Warner has been at Marcy State Hospital for the past 14 years, and with the Department of Mental Hygiene 34 years. He is a diplomate of the American Board of Psychiatry and currently president of the Mohawk Valley Neuropsychiatric Society.

NATIONAL FOUNDATION FOR INFANTILE PARALYSIS.—One of the newly announced grants by the National Foundation will be for research in vaccines to protect the human nervous system against invasion by viruses. Dr. Jonas E. Salk will direct this research at the University of Pittsburgh.

Under another of the grants, the Rockefeller Institute for Medical Research will continue their investigations of drugs for the treatment or prevention of polio crippling.

Studies of possible live-virus vaccines will go on at Yale University under another grant. After preliminary injections of Salk vaccine, the subjects will receive weakened strains of virus by mouth—so-called live-virus vaccines.

TREATMENT OF JUVENILE DELINQUENTS, CALIFORNIA.—Recently the State of California has authorized the establishment of a special treatment program for juvenile delinquents with psychiatric problems who are in need of longterm treatment. Special units whose efforts will be devoted entirely to treatment are now being organized within one correctional school for boys and one for girls. Each treatment unit will consist of a psychiatrist as director, plus the necessary number of clinical psychologists, case and group workers, who will make maximum use of all modern treatment methods. It is estimated that these special problem cases constitute approximately 15% of all youths admitted to Youth Authority institutions.

DES MOINES CHILD GUIDANCE CENTER.—The Center will inaugurate a "Day-Hospital" project under a grant from the National Institute of Mental Health. Aim of the project is three-fold: 1. To provide an intensive therapeutic program to reduce some of the psychological and economic difficulties involved in hospitalization. 2. To make pos-

sible intensive diagnostic study and treatment for children with mixed disorders (*e.g.* physical handicap and neurotic disorder). 3. To evaluate systematically the relative effectiveness of day-hospital and outpatient care for children.

A new building for both day-hospital and outpatient services will be erected adjoining Raymond Blank Memorial Hospital, a teaching hospital in pediatrics.

A brief description of the project is available by writing to: Howard V. Turner, M. D., Medical Director, Des Moines Child Guidance Center, Des Moines 9, Iowa.

CEREBRAL VASCULAR DISEASE AND STROKES.—This is the title of a new illustrated publication on disease of blood vessels of the brain, just released by the Public Health Service (Publication no. 513). The booklet shows the 5 important ways in which vessel diseases impair the working of the brain and outlines steps involved in treatment and rehabilitation.

A free copy may be obtained from the Heart Information Center, National Heart Institute, Bethesda 14, Md.

STUDY CENTER FOR MENTALLY RETARDED CHILDREN, BUFFALO, N.Y.—A grant of \$45,000 to establish the Buffalo Diagnostic and Counselling Study Center for Mentally Retarded Children was announced by Raymond W. Houston, chairman of the New York State Interdepartmental Health Resources Board. The Center will be an integral part of the Rehabilitation Center of the Children's Hospital and Crippled Children's Guild at 936 Delaware Avenue, Buffalo, N.Y.

Complete evaluation, diagnosis and treatment will be offered to mentally retarded children. Parent counselling and guidance in planning a definite program for the child will be a major goal. Other features of the program are teaching medical students, nurses, psychologists and social workers modern techniques of treatment, evaluation and diagnosis of mental retardation.

Dr. Robert Warner, Director and Coordinator of the Rehabilitation Center, will direct the new Study Center.

SOCIAL WORK GRANTS, UNIVERSITY OF DENVER, COLO.—Federal grants amounting to \$59,787 have been allocated to the University of Denver School of Social Work, 1957-58 term. The grants will be used to maintain an expanded program for the education of psychiatric social workers, and to prepare social workers for state vocational rehabilitation programs, hospitals, clinics, adjustment centers for the blind and crippled children's services.

AMERICAN PUBLIC HEALTH ASSOCIATION ANNUAL MEETING.—At the 85th annual meeting to be held in Cleveland, Ohio, November 11-15, 1957, there will be ample representation of all the problems of mental health. Most of the papers to be presented on this subject emphasize community mental health problems, and the need to educate the public to the problems of the mentally ill. Some of the topics listed are "Intramural Psychiatry in Public Schools," "Health Department Participation in a Developing Community Mental Health Program," and "Mental Health Aspects of Environmental Resources and Complexes." Dr. Rema Lapouse, associate in psychiatry and preventive medicine and public health at the University of Buffalo, and secretary of the mental health section of the American Public Health Association, counts on a wide response on the part of psychiatrists and associated workers in the field of mental health, to the 5-day program.

WORLD MEDICAL PERIODICALS.—The 2nd edition of *World Medical Periodicals* published by The World Medical Association, became available in October, 1957. The first edition, published by UNESCO and WHO, appeared in 1953. As a result of continued revision during the past 2 years, some 1,400 new titles have been added and 600 omitted. The new edition contains the titles of medical, pharmaceutical, dental and medical veterinary periodicals in existence at the beginning of 1957, and also a few well known periodicals which have ceased publication since 1900 but to which reference is frequently made in current medical bibliographies.

The new appendices give: 1. a list of the principal international abstracting journals and 2. a list of the main international periodical indexes.

Other new features include the International Code for the abbreviation of titles of periodicals as issued in 1954, and the making of the index of periodicals by subject more useful in grouping the index numbers by countries.

One objective of the publication, *World Medical Periodicals* is to provide medical editors and publishers with abbreviations of the periodicals listed which had been determined by an accepted medical code, thereby securing uniformity in one particular detail of medical bibliography.

The editorial office: *British Medical Journal*, BMA House, Tavistock Square, W.C.1, London, England.

WHICH ACADEMIC CAREER?

... philosophical activity as a *business* is not normal for most men, and not for me. To be responsible for a complete conception of things is beyond my strength. To make the *form* of all possible thought the prevailing *matter* of one's thought breeds hypochondria. ... But as my strongest moral and intellectual craving is for some stable reality to lean upon, and as a professed philosopher pledges himself publicly never to have done with doubts on these subjects, but every day to be ready to criticize afresh and call in question the grounds of his faith of the day before, I fear the constant sense of instability generated by this attitude would be more than the voluntary faith I can keep going is sufficient to neutralize. ... A 'philosopher' has publicly renounced the privilege of trusting *blindly*, which every simple man owns as a right—and my sight is not clear enough for such constant duty. Of course one may say, you could make of psychology proper just such a basis, but not so, you can't divorce psychology from introspection, and insecure as is the work demanded by its purely objective part, yet it is the other part rather for which a professor thereof is expected to make himself publicly responsible.

—WILLIAM JAMES
(*Diary*, act. c.30)

BOOK REVIEWS

PSYCHICAL RESEARCH. By R. C. Johnson. (New York: Philosophical Library, Inc., 1956. pp. 176, \$2.75.)

The review of a book on psychical research in a psychiatric journal implies that this "subject" has some relevance to psychiatry. The question is: Does it? The basis for our answer should be carefully weighed. According to the proponents of parapsychology, their work has relevance not only to psychiatry, but to most other scientific and practical endeavors as well. This reviewer, however, is of the opinion that writings on parapsychology are compounded of various manifestations of the all-too-human inability to tolerate object loss with a profound epistemological confusion concerning inquiry, language and science. This book only confirms the reviewer's foregoing position toward psychical research. Still, there is a persistent interest among psychiatrists in this subject, and an equally persistent claim for the psychotherapeutic relevance of telepathy in various quarters. These "social facts" amply justify critical evaluation of such material.

The contents of the book can be best described by listing the titles of the 10 chapters: "I. History of Psychical Research, II. Telepathy and Clairvoyance, III. Precognition and Retrocognition, IV. Object-reading or Psychometry, V. Psycho-kinesis and Poltergeist Phenomena, VI. Materialisation Phenomena, VII. Apparitions and Hauntings, VIII. Mediumship, IX. The Problem of Survival, X. The Importance of Psychical Research." No new raw observations, or "data," are provided. The author's ideas are based on the writings of others and his own thinking about these problems. A few illustrative passages will be quoted, since the "atmosphere" of the book and its author's thinking can probably be best conveyed in this fashion.

"It is almost ironical that the labours of psychical research have enlarged our knowledge of the mind's powers, and by implication made the essential dependence of mind on matter seem less and less plausible" (p. 158).

"My own considered view is this: that responsible individuals with caution and persistence can, and have, satisfied themselves of the survival by intimate friends of the death of the body. I confess that this is my own conviction in relation to an intimate friend of mine who died some ten years ago. I consider, however, that this kind of conviction is personal and cannot be handed on to others. When, however, we look at the issue of survival objectively, the cumulative evidence strongly supports the survival hypothesis as by far the most plausible" (p. 159).

"If, as I believe, the so-called material world is a creation of Mind (with the aetheric world an intermediate creative stage), then it is on the level of Mind that the prototype of the material level exists. When a man no longer retains awareness

of the material level, whether in sleep by a temporary inward withdrawal of consciousness, or whether by discarding his body at death, consciousness is refocused on an interior level, i.e., one which is a step nearer to the ultimately real. This new world-level then acquires objectivity for him" (p. 161).

"It will be clear that the zone or level between the mental and the material, which in this book we have labelled aetheric, must be one of great importance to physical health" (p. 168).

The author concludes with the following paragraphs:

"Today, most if not all of the miracles can be accepted as credible in the light of the phenomena considered in this book. Powers of the mind which we have come across already, if fully under the control of the will, would be capable of performing these miracles. Our concept of the term "miracle" would then be of an unusual physical event, inexplicable on the basis of current laws of the physical world, but wholly "natural" as an exercise of the powers and energies of the mental level. I can see no reason why Religion should not view Psychical Research as a friendly fellow-traveller in the search for Truth. Psychical Research is primarily a search for Truth by the well-established scientific method of experiment and by the traditional method of analysis of testimony common to such disciplines as law and history. Its field extends between the familiar material world we know through our senses and the so-called subjective world of Mind. Behind the levels of Mind are unplumbed depths of being which take us nearer to the ultimately Real. But this is the territory—awesome, fascinating, rapturous, and infinitely more important—of the Mystics" (p. 173).

The author, like many parapsychologists, raises the question of survival after death. Belief in this, setting aside its psychological determinants, is based on, and illustrates, a rather primitive sort of error in reasoning. This reasoning—in the reviewer's opinion—runs something like this. "I" can lose my arm or leg, or even my eye, and still "I" remain. In other words, one can lose parts of one's body, and still feel that one's sense of identity has remained unchanged. Accordingly, the reasoning seems to be: If I can lose this or that part of my body and still retain my (sense of) identity, why should it not be possible to lose my entire body, and still retain my "self?" Indeed, belief in the verity of this outcome has probably played an important part in the seeking of joyful death by religious martyrs. For such a person, death is not "death," but a voyage to Paradise. No doubt, man's ability to tolerate, and to accept, object loss, including the loss of one's own body and self, is frequently limited. And the struggle for its mastery gives rise to all sorts of human activities, some more, some less useful; the word

"useful" here refers to something more than merely the restoration of the lost sense of well being. Human activities having some pertinence to this problem thus encompass, among others, science, religion, fiction and paranoid pseudo-science. This book, and many others dealing with "psychical research," may be regarded, therefore, as posing an interesting—and perhaps for some people, an important—challenge in distinguishing between good science, bad science, science fiction and paranoid system building. It behooves authors, publishers and the intelligent reading public alike to consider what material falls in which category and to know the reasons for their choice.

THOMAS S. SZASZ, M. D.
Syracuse, N. Y.

MENTAL HYGIENE (Revised Edition). By D. B. Klein. (New York: Henry Holt & Co., 654 pp., 1956. \$6.75.)

This revised edition, including 654 pages, is aimed at enlightening the general public, and to create a climate of awareness of its mental health needs. It contains a glossary of terms, and a complete index. Bibliographic references appear as footnotes.

The book is divided into 4 parts. The first is an introduction embracing comments upon the nature and scope of mental hygiene. The author calls attention, as others have, to the fact that mental hygiene or mental health enters into every phase of human activity. It constitutes a problem, therefore, not only as a challenge to modern medicine and its auxiliary disciplines, but also to the legal and educational professions; to legislators and statesmen; to the sociologist and the industrialist; to the psychologist and the clergy; and to community and civic leadership concerned with the development of an enlightened and articulate public opinion on this subject matter. Part I also briefly reviews the history of the so-called "mental hygiene movement" and some of the problems with which mental hygiene is concerned.

Part II reviews the status of knowledge concerning the nature of mental disorders and the understanding of abnormal behavior; separating and discussing, on the one hand, those disorders associated with structural brain changes, or situations that interfere with brain cell nutrition; and those on the other hand that have long been designated as functional in origin.

Part III is concerned with the subject of prevention, of prophylaxis, or situation that hinders the development of psychiatric disorders. This particular situation is approached by reference to the numbers and percentages in each diagnostic category of patients admitted to state and private mental hospitals. The author is not too optimistic respecting the prevention of those disorders associated with organic or structural brain changes, nor is he cheerful about preventing those of a functional nature in the light of the present state of knowledge. He deplores the paucity of available funds for the support of concerted research in the mental health fields, but envisages the day, when such research

becomes effective, that mental hygienists will be able to substitute "the certainty of touch that comes with the accumulation of tested knowledge." "Without a solid foundation of such tested knowledge the prophylactic campaigns of the mental hygienist will continue to be more of a tribute to his earnest hopes than a record of positive accomplishment."

However, the book gives very little space to a consideration of the role which the formulation or modification in public policies toward the mentally ill, and their administration, may play in the prevention of such illness; particularly with reference to their early detection and the application of measures for their treatment or amelioration. Perhaps, in the light of the present knowledge, this latter approach may be, for the time being, the foundation upon which the superstructure for the prevention of mental illness must be built. The author concedes that progress has been made, for an insight into the nature of these problems and an appreciation of their complexity is more profound than that of the "alienists" of earlier generations. Considering how little money society has devoted to research, those responsible for what progress has been made are all the more deserving of gratitude.

Part IV deals with the promotion of positive mental health. This is approached from the standpoint of personality growth and development and its emancipation. The author asserts that the development of the positive aspects of good mental health is intimately related with emotional security having its roots in the life of home and family. He recognizes the fact that the personality of each and every person is the result of what the world and its people have done to him today, yesterday, and the days before. He does not rigidly adhere to the doctrine that personality development is exclusively determined by parent-child relationship and permanently fixed by experiences of early infancy and pre-school years. He recognizes, therefore, that the education and socialization of children is not limited to the home or early developmental years, and that there is not always but one right way to rear children.

Borrowing from Havighurst, the author discusses personality development for promoting positive mental health from the standpoint of goals to be sought: such, for example, as (a) patterns of behavior respecting dependence and independence; (b) to give and receive affection; (c) to deal with different social groups; (d) to assimilate and acquire a moral code and an ethical sensitivity; (e) to acquire appropriate attitudes toward sex roles and toward masculinity and femininity; (f) to accept characteristics of physical growth and development; (g) to develop increasing effectiveness in muscular skills; (h) to accept and become increasingly familiar with the physical world; (i) to acquire increasingly effective modes of communication, accurate concepts and reasoning skills; and (j) to feel at home in the universe.

The author comments upon the dangers of over dependence of psychology and upon conflicting teachings and the perspectives of parents and teachers. He also discusses in the section devoted to the development of a balanced personality the dynamics

of conscience; the role of home fixation to functional autonomy; the coping with reality; and the Utopian aspects of a program for promoting the positive aspects of mental health. He believes that repression is an important factor in personality integration, and comments, "Life being what it is, repression of some sort is not only necessary but inevitable."

The book closes with a comment on the significance of religious teaching and the role which the so-called "old fashioned virtues" may play in promoting positive mental health.

On the whole this book is a praiseworthy contribution and should fulfill a need for which it was written.

W. L. T.

EPILEPSY AND THE LAW: A PROPOSAL FOR LEGAL REFORM IN THE LIGHT OF MEDICAL PROGRESS.
By Roscoe L. Barrow, and Howard D. Fabing.
(New York: Hoeber-Harper, 1956. \$5.50.)

With the recent publication of *Epilepsy and the Law* a tremendous step has been taken toward correcting the many archaic laws that have contributed to the stigma associated with epilepsy. Epilepsy laws have lagged far behind medical progress in understanding epileptic phenomena and controlling the symptoms. The special committee on legislation of the American League Against Epilepsy, aided by a grant from the National Institute of Neurological Diseases and Blindness, sponsored a survey of laws and administrative practices affecting epileptics. Dean Roscoe L. Barrow, University of Cincinnati School of Law, and Dr. Howard D. Fabing have collaborated in a scholarly and exhaustive review of the laws of the 48 states with respect to marriage, driver's licenses and employment of epileptics. They show that the existing laws were enacted at a time when even the medical view held that the etiology of seizures was unknown, seizures were incurable, the condition was accompanied by progressive mental deterioration and progeny of epileptics was likely to have seizures. Many states (13 at the present time) have laws making marriage of persons with epilepsy a crime, making their sterilization mandatory or permissible, and which bracket epilepsy with insanity, and mental retardation as sufficient cause for custodial care. Wisconsin has recently initiated legislative reforms by repealing laws of sterilization of epileptics, of marriage prohibition, of compulsory reporting and is revising its policy on driver's license. Revision of workmen's compensation laws remains to be enacted. The report is well indexed so that each state's position in respect to the various laws may be quickly found. Pointing out problems does not automatically correct them. Included, therefore, is a blueprint for modernization of legislation which discriminates against epileptics.

ELIZABETH G. FRENCH, M.D.,
Boston, Mass.

J.A.M.A. CLINICAL ABSTRACTS OF DIAGNOSIS AND TREATMENT. American Medical Association.
(New York: Grune & Stratton, Inc., 1956, pp. 661. \$5.50.)

This volume presents a large number of abstracts emphasizing diagnosis and treatment selected from the "Medical Literature Abstracts" section of the J.A.M.A. One naturally compares it with other abstract annuals and finds its coverage much broader—replacing several volumes. As well as covering the 10 body systems there are chapters on eye, ear, nose and throat, metabolism, poisonings, infections, therapeutics, and diagnostic techniques. This reviewer feels some brief editorial comments by experts in the various fields would be a valuable addition.

The volume should be of value to the general practitioner, or the specialist with broad interests; (a) if he had been negligent of the literature but took time for this quick method of review for 1955, or; (b) wished to look up recent articles on some particular subject. One could locate almost any subject in the index and, depending on the amount of recent progress, find one or more abstracts reviewing current experience and thought.

W. T. W. CLARKE, M.D.,
Toronto, Canada.

CLINICAL EXAMINATIONS IN NEUROLOGY. By James A. Bastrom and others. Sections of Neurology, and Section of Physiology, Mayo Clinic, and Mayo Foundation. (Philadelphia: W. B. Saunders Co., 1956. \$7.50.)

This text is an excellent example of the recording of the techniques in examination of the nervous system, selected by a number of neurologists over more than the past 50 years. These men have had the opportunity of working as a "guild" and thus contended, with a minimum of competition, to divert the truly scientific interest in acquiring the most efficient techniques for their performance of a neurological examination.

There is nothing revolutionary in the presentation, but it is noteworthy that the treatment of each chapter is extremely thorough. The neurological history is covered in 2 chapters, and the latter sets out the use of the Mayo Clinic neurological charts used for recording.

A chapter is devoted to neuro-ophthalmology in which the cranial nerves associated with eye and pupillary movements are considered, as well as the optic nerve. Motor function is given 2 chapters. The latter describes the specific study of muscle.

In treating the examination of mental function, it is refreshing to find a neurological text that does not involve itself with a pseudo-psychiatric examination, and present this as a neurologist's assessment of mental function. The chapter on clinical examination in selected problems of pain is a novel treatment and is extremely practical.

The members of the section of psychology have contributed 2 excellent chapters—one on electroencephalography, and the other on electro-myography. Sufficient basic science is included to ex-

plain the nature of the modalities measured and the responses to be expected in the various more common neurological diseases.

Chapter 16 provides a well systematized reference for pharmacological and biochemical aids in the neurologic diagnosis of altered states of consciousness (including convulsive disorders), headache, muscular weakness, polyneuropathy, Wilson's disease and diabetes insipidus. The final chapter on spinal fluid examination by lumbar and cisternal puncture completes this comprehensive text.

This volume should be of great value to the student and no doubt, will be prized in any neurologist's library. It is indeed fitting that a work of this calibre was inspired by 2 of our outstanding pioneers in American Neurology, namely, Henry W. Woltman and Frederick P. Moersh.

LORNE D. PROCTOR, M.D.,
Henry Ford Hospital.

ATLAS OF NEUROPATHOLOGY. By *Nathan Malamud, M.D.* (San Francisco: University of California Press, 1957, pp. 468, \$20.00.)

The photography of both the gross and the microscopical specimens illustrated in this comprehensive atlas is excellent. It is of interest that, apart from two pages of colour photo-micrographs, the author has found black and white photography to be adequate throughout.

The atlas illustrates and describes nine types of disorders, after a preliminary chapter on Cytology and Cellular Pathology, under the titles of inflammatory, toxic and nutritional, demyelinating, vascular, traumatic, degenerative, neoplastic, developmental and a final important chapter on Sequelae of Paranatal and Postnatal Disorders. The chapter sub-headings combined with a good index make the book easy to use.

It will prove a valuable reference work on the shelves of general and special medical libraries, and it should be available in all laboratories in which undergraduate and graduate neuropathology is taught.

ERIC A. LINELL, M.D.,
University of Toronto.

THE YEAR BOOK OF NEUROLOGY, PSYCHIATRY AND NEUROSURGERY 1956-1957 SERIES. Edited by *Roland P. Mackay, M.D.* (Neurology), *S. Bernard Wortis, M.D.* (Psychiatry), *Oscar Sugar, M.D.* (Neurosurgery). (Chicago: The Year Book Publishers, 1957. \$7.00.)

With its 56th year of publication this Review records another change in its editorial staff. Ten years ago a section on neurosurgery was introduced in the Year Book under the editorship of Percival Bailey. This year Oscar Sugar, who for the past 3 years and more shared editorial duties with Dr. Bailey, has taken over the responsibilities for this section. The continued policy, as Dr. Sugar states, "is to select current articles of significance and abstract them in length sufficient to be useful even without reading the original." Special atten-

tion is to be given to important articles in foreign journals. Sugar makes timely comment on the serious handicaps in communication between languages. One suggestion offered is that the National Library of Medicine in Washington, when newly housed, might establish a center for coding world literature that would in some degree reduce this handicap. Certainly the ability to read other languages beside one's own should be a required feature of medical education.

The editor notes that the past year has shown particular interest in "surgery of involuntary movements, vascular lesions, hypothermia, ultrasound and whiplash injuries of the cervical spine. There is a notable decline in interest in sympathectomy for hypertension and Raynaud's disease, operations on the eighth nerve for Ménière's syndrome and lobotomy for mental diseases."

Mackay introducing the section on neurology emphasizes the necessity not only of cultivating clinical neurology but of stimulating basic anatomic and physiologic research for the benefit of psychiatry as well as neurology, and in line with the truism: "no psychosis without neurosis." Such investigations embrace the whole range of neurologic function "from sensory nerve endings to muscle contraction, and in particular deal with the organization of sensory data and the formulation of behavior."

In this context the editor calls attention to the work of D. C. Sinclair of Oxford "which destroys much of the doctrine of specific energy" in the transmission of sensory impulses.

Again, the experience, or reported experience of pain is of "such complexity as all but to defy analysis." It is comprehensively dealt with, "from anatomy to philosophy" in a French symposium edited by Alajouanine (*La Douleur et les Douleurs* Paris. Masson et Cie, 1957).

While the last word concerning immunity against polio by means of vaccines has not been spoken, Mackay sums up: "At present there is no doubt that the Salk vaccine, properly given, confers a great and effective immunity, without significant hazard. Thus a victory over poliomyelitis is confidently expected, if only the vaccination of the population en masse can be accomplished."

Familial multiple sclerosis is dealt with in a remarkable report by a Swedish observer, Bengt Estborn, who describes 40 illustrative families, one striking example being the occurrence of the disease in 2 sisters, 1 brother, the mother and an uncle.

Concentrating on the gaps in our knowledge of the relationships between convulsive disorders and the EEG, Mackay remarks that probably "when all this is learned, we shall discover that all epilepsy is one, that all persons are capable of having seizures and differ from one another in this regard only in their degree of readiness ('threshold') for the process, that so-called etiologic factors are only trigger mechanisms, and that the types of seizures are determined solely by the locus of the discharging lesion."

In the section on psychiatry Bernard Wortis notes

the extraordinary swing to psychopharmacology in the treatment of mental disease. The ataraxics (tranquilizers) now top the list of therapeutic agents, and in many institutions have contributed notably to the solution of the overcrowding problem. Much needed studies in the differential evaluation of these drugs in their numerous modifications and combinations are also reported and the need for further research and controls emphasized.

The mental disorder of the year has undoubtedly been schizophrenia, which is more often spoken of in the plural than the singular, or better still as a schizophrenic reaction. This category has received more attention than any other psychotic group, from the standpoints of nosology, treatment, and research. Wortis calls attention to the work of Heath who reported schizophrenic-like reactions in humans by administration of a substance (taraxein) extracted from the serum of schizophrenic patients. Another experimental study by Akerfeldt of Sweden, which may be of diagnostic value, showed a high frequency of positive serological reaction in schizophrenic patients to the dye N.N. Dimethylphenylene. These and other experimental studies require further extension.

Among the most important research reports of the year were those in the genetic symposium at the annual meeting of The American Psychiatric Association. They were those on "Genetic Principles in Human Populations" by H. J. Muller, "The Molecular Basis of Genetics" by Linus Pauling, and "The Genetics of Human Behavior" by Franz J. Kallman (All in *Am. J. Psychiat.* Jan. 1956).

A feature of Wortis' introductory remarks is a series of fairly long selected bibliographies covering drug studies and the various other departments of psychiatric inquiry.

The division of the Year Book on neurology and neurosurgery is illustrated. As usual the volume offers a good representative coverage of the fields dealt with.

C. B. F.

TABOO. By *Franz Steiner*. With an Introduction by *E. E. Evans Fritchard*. (New York: Philosophical Library, 1956. pp. 154.)

In *Totem and Tabu* Freud provided the most brilliant analysis of the meaning of taboo that anyone has ever written. *Totem and Tabu* is often dismissed as a "just so" story, and, perhaps, for the most part it is. But what is sometimes forgotten is that it contains some of the most exciting examinations of the nature and function of certain historically and anthropologically interesting ideas to be found anywhere in the literature. Among these ideas is that of *taboo*. Freud is extremely illuminating on this subject, but it has remained to the late Franz Steiner to write by far the best study of the subject that we have.

Steiner's critical examination of the relevant theories and the material writings, which have been related to the study of *taboo*, Steiner brings his excellent analysis of its meaning and significance to a successful conclusion, making the double

function of *taboo* crystal clear. That double function is first, the identification and classification of transgressions, and second, the institutional localization of danger.

This is a first-rate book of great value to all students of the human mind. The death of the author in the autumn of 1952 at the early age of 43 robbed anthropology in particular and the social sciences generally of a distinguished contributor. This book will serve to keep his memory green as long as the interest in this subject endures.

M. F. ASHLEY MONTAGUE, PH. D.,
Princeton, N. J.

CURRENT THERAPY 1957. Edited by *Howard F. Conn, M.D.* (Philadelphia: W. B. Saunders Co., 1957, \$11.00.)

The latest edition of *Current Therapy* has been carefully prepared as usual.

The policy of having many new contributors to each year's volume has the effect of maintaining freshness for the reader as well as giving a wide opinion in the subjects.

The editors and consultants wisely make the point that no treatment should be considered unless the diagnosis is clear and a book on therapy alone will not appear to minimize that tremendous problem. Many of the contributors, therefore, have written a preamble to their particular subject stating the principles of diagnosis and the fundamentals on which therapy must be based.

Good examples are the article on Hypertension by Horace Smith, that on Neurocirculatory Asthenia by Donald Ross, and that on Pernicious Vomiting of Pregnancy by Nicholson Eastman.

This edition keeps up the standard to which Dr. Conn and his associates have aspired from the beginning. There is a full list of the normal laboratory values of each subject and a good index. The publishing is as good as ever.

A book of this kind cannot be "reviewed" in the ordinary sense. One can only ask the questions: is its object a sensible one: does it achieve its object? To these one feels that the answer is "Yes."

TREVOR OWEN, M. D.,
Toronto, Canada

ATYPISCHE PSYCHOSEN. By *Bernhard Pauleikhoff*. Basel (Switzerland) and New York: S. Karger, 1957. pp. 141. Fasc. 99 of *Bibliotheca Psychiatrica et Neurologica*.

The author is interested in the presence or absence of a meaningful order (*Sinngesetzlichkeit*) and, or, of meaningful relationships (*sinngestzliche Zusammenhaenge*) in experiencing. He is of the opinion that it depends essentially on 3 factors whether and how far the experiential structure of a personality is meaningful, namely on 1) constitutional factors, 2) the age, 3) the past experiencing and 4) on the situation. He attempts to show that the meaningful order is important in differential diagnosis. He illustrates his thesis with 14 histories of atypical cases, the differential diag-

noses between psychopathy and (schizophrenic) psychosis; between psychosis on a physical basis (brain tumors) and schizophrenic or manic-depressive (cyclothymic) disorders; between atypical psychotic pictures and possible brain changes. He adds cases in which the distinction between schizophrenic and cyclothymic psychosis is not safe. The author warns that the individual "cannot determine the situation completely, but has to adjust himself within limits to the situation." He assumes that the meaningful order in perception and thought is often disturbed in schizophrenia. In uncomplicated cyclothymic depressions, the meaningful relationship to the (structure of) the personality may be disturbed; delusions of guilt, impoverishment, hypochondriasis fit in meaningfully. Certain paranoid delusions (persecution) may make the differential diagnosis difficult or even impossible at least in cross-sections.

This is a very scrupulous piece of work in which the author used several statistical figures from material of the psychiatric-neurological clinic Heidelberg. He follows in most regards his teacher Kurt Schneider to whom the book is dedicated. It is not always easy to follow the author's trend of thought as he seems to have a certain predilection for complex formulations and complex words. This review might appear to him a not permissible simplification of his discussion. However, it is not so much what he expounds as the way in which he does it that lends a certain originality to his presentation. Nobody will deny that the "Sinnzusammenhang" can be a most helpful tool.

Dr. Pauleikhoff's review of the pertinent literature with which he begins his book is the more commendable as this is his first sentence: "The importance of Emil Kraepelin for psychiatry can scarcely be overestimated." (Die Bedeutung Emil Kraepelins fuer die Psychiatrie kann schwerlich ueberschaetzt werden.)

EUGEN KAHN, M.D.,
Houston, Tex.

EXPLORATIONS IN AWARENESS. By J. Samuel Bois,
(New York: Harper and Brothers, 1957, pp.
334. \$2.75.)

The author who is an important Canadian industrial psychologist and Past President of the Canadian Psychological Association has applied the theories of Alfred Korzybski to problems of business management. This little book represents many years experience and of course will prove useful, not only in executive training, but also for anybody who has to work with people, (and who doesn't?).

His format is much more easily followed than Korzybski's original *Science and Sanity* and the popular, frequently humorous, approach may well shock some of the stuffer 'disciples' of General Semantics. Its readability has however not detracted from the basic scientific thinking and the original ideas for application of the author. He carefully takes us through problems of verbal confusion, winding up with a program for guided awareness and methods of thinking and speaking

more precisely—hence more lucidly. He has a final chapter comparing danger indicators of what we say, what we do, how we say it and how we do it, which should prove useful in helping us, as the author puts it, to 1) "stop wearing ourselves out or destroying ourselves by excessive bursts of energy; 2) keep functioning within an optimum range of efficiency; 3) adapt ourselves to shifting objectives and changing conditions."

If you are familiar with General Semantics this text will give you a different viewpoint. If you do not know Korzybski's work, this text is an exciting beginning.

DOUGLAS M. KELLEY, M.D.,
Berkeley, California.

UNDERSTANDING HUMAN BEHAVIOR. By James L. McCartney, M.D. (New York: Vantage Press, 1956. \$3.50.)

The author states his goals as follows: "This book is an attempt to bring together what is known about human behavior and what can be done to help maladjusted individuals gain a healthier state of mind."

A little less than the first half of this 258-page volume is devoted to the normal personality and its various functions. The first chapter is on the integrated personality followed by 3 on frustration, guilt and dreams. His approach is multidimensional as he discusses heredity, congenital defects, the central nervous system, the endocrines, nutrition and psychological influences. The latter follows current genetic and dynamic concepts.

The remainder of the book is largely devoted to personality problems and their treatment. One chapter on diagnosis reproduces The American Psychiatric Association's standard nomenclature in full and gives percentages seen in hospital and private practice, as well as a discussion of the main diagnostic categories. The next chapter considers normal and aberrant sexual behavior. Therapy is discussed in chapters devoted to individual and group psychotherapy and to physical therapy. Dr. McCartney closes his book with a discourse on a philosophy for life. Throughout, he gives a large number of case illustrations which are refreshing in their brevity although occasionally they are so condensed as to be emasculated. A glossary of technical terms makes this book more useful to the average reader.

One can find fault with a number of details: intelligence is considered to be rigidly fixed at birth; the discussion of 47 instincts and their corresponding emotions; fear is the only perception in early life; bowel training is to be started at 6 months; the definition of transference as having confidence in the therapist, and the importance of the death instinct, etc. In its comprehensiveness, coverage often had to be superficial in certain areas, but a great amount of pertinent material has been brought together in a cohesive fashion.

On the whole, this book is a sound one and may safely be recommended to public libraries for the use of interested laymen.

ERIC T. CARLSON, M.D.,
Cornell University Medical College.

PSYCHIATRIC FACILITIES IN PRISONS AND CORRECTIONAL INSTITUTIONS IN THE UNITED STATES

WARREN S. WILLE, M.D.¹

The following report is based on a questionnaire survey of prisons and correctional institutions in the United States which was carried out in July, 1954. Because of the dearth of information on this subject, it was felt that such a survey was long overdue. The subject was discussed with Dr. Winfred Overholser at the May, 1954 meeting of The American Psychiatric Association in St. Louis, and it was decided that a comprehensive survey would be made of psychiatric facilities in penal and correctional institutions for the care of young adult and adult offenders. This was in keeping with the present intention of The American Psychiatric Association to make a thorough survey of all facilities in the United States for the treatment of mental illness. It was felt that a similar survey of institutions for the care of juveniles was equally important, but this was considered outside the scope of the present project. Since most of the juvenile institutions are under jurisdictions completely separate from more of the state institutions for adult offenders, a survey of the juvenile institutions would necessitate a separate study.

When this research project was planned in the early part of 1954, the only previous survey with which to make any comparisons was the one carried out by Dr. Overholser in 1926(1).

In the early part of 1926 the National Crime Commission through its subcommittee on the Medical Aspects of Crime, took steps to ascertain the extent to which psychiatry was employed in the courts of criminal jurisdiction and the penal and correctional institutions in the United States. The questionnaire survey of these institutions was completed by July 1, 1927. This original survey included all juvenile institutions as well as the state prisons, farms, jails, and the various criminal courts. At that time it was interesting to note that in the various state prisons, reformatories, and farms there

were only 19 full-time psychiatrists and 24 part-time psychiatrists employed. Twenty-four of the states had no psychiatrists, either on a full or part time basis, and 34 prisons had no psychiatrists in their employment. At that same time the federal prisons reported only 3 full-time psychiatrists and one part-time psychiatrist. This certainly reflects the enormous neglect of the personal study of offenders at that time.

Soon after the writer sent out the questionnaires in the present study, it was learned through the June 1954 issue of "Correctional Research"(2), that the United Prison Association of Massachusetts had just concluded a survey of the 48 states. Their survey consisted of a brief questionnaire directed to the departments of correction of the various states, in which the following question was asked: "Does your state provide psychiatric services for inmates in any of its correctional institutions for adults?" (Other than institutions for criminal insane or defectives).

Because this previous questionnaire was directed to the departments of corrections of the various states, instead of to the individual institutions, it was felt that the present questionnaire study should contribute some further information on this subject. In the present study, a 3-page questionnaire containing 39 items was mailed to all 315 state and federal correctional institutions listed in the directory of state and national institutions published by the American Prison Association. Of the 315 institutions so listed, 167 were prisons or reformatories for adult or young adult offenders. The remaining 148 were camps, prison farms, ranches, industrial schools, or state training schools for juveniles which happen to be under the jurisdiction of departments of correction. One institution listed in the directory was a state hospital for the criminally insane and 3 were special institutions for defective delinquents. Since the names of the institutions did not always give a clear indication of the nature of the facility,

¹ Director, psychiatric clinic, State Prison of Southern Michigan, Jackson, Mich.

questionnaires were sent to all 315 institutions in the directory.

A total of 171 completed questionnaires were returned. Fifty of these had to be discarded for the purpose of this survey because they were from institutions for juvenile offenders. The remaining 121 questionnaires were received from the 167 prisons and reformatories listed in the directory, for a total response of 72%. No returns were received from the farms, forestry camps, cattle ranches, and other small units. This might be expected since it is known that the majority of these units do not have any psychiatric treatment facilities.

The state and federal systems will be discussed separately, because the 17 adult institutions in the federal system generally have much more adequate psychiatric staffing than the state systems. (See Table A.) Of the 104 state prisons and reformatories reporting out of a total group of 150, 80 stated that the services of a psychiatrist were available within the institution. Only 19 reported having the services of a full-time psychiatrist. Twenty-eight had psychiatrists working regularly, but on less than a full-time basis. Thirty-six had psychiatrists employed in a consultant capacity only.

In the case of those institutions having a psychiatrist working on a consultation basis, the question was asked as to the approximate number of visits to the prison a year. Fifteen institutions reported only 2 to 12 visits per year. It was felt that for practical purposes these institutions have nothing in the way of psychiatric services. Nineteen institutions reported 13 to 50 visits per year. Nine reported that their consultants made more than 50 visits per year.

Most of the psychiatric services were concentrated in a few large institutions. Several of the 19 institutions having full-time psychiatrists also employed one or more part time psychiatrists or psychiatric consultants.

Ten states reported that they had no psychiatrists working in their correctional institutions, even in the capacity of consultants. Thirteen other states plus the District of Columbia and the Territory of Hawaii reported that they had no psychiatric services in their adult correctional institutions except for psychiatrists making occasional visits in a consultant capacity. This gave a

total of 23 states, plus the District of Columbia and the Territory of Hawaii, which had no psychiatric facilities in their correctional institutions, or else had no services except for occasional visits by psychiatric consultants.

At the time of this survey, the 80 state institutions reported a total of 31 full-time psychiatrists, 34 part-time psychiatrists, and 42 psychiatric consultants, for a total of 107 psychiatrists working in state adult correctional institutions.

The Federal Bureau of Prisons had much more adequate coverage, in that there was some sort of psychiatric service available to all 17 of the federal adult institutions. The federal system employed 12 full-time psychiatrists, 5 part-time psychiatrists, and 9 psychiatric consultants in their 17 institutions. However, even in the federal system, a widespread lack of adequate psychiatric facilities was recognized. Dr. H. M. Janney(3), Medical Director of the Bureau of Prisons, has commented on his difficulty in getting psychiatrists to fill vacancies in the federal penal system.

Combining the figures for both state and federal systems, there is reported a total of 43 psychiatrists working full-time, 39 on a part-time basis, and 51 in a consultant capacity only. This gave an overall total of only 133 psychiatrists in the U.S.A. who spend any time working in our state and federal penal institutions. (Table B.) There was close agreement between these results and the findings of the previous survey independently conducted by the United Prison Association of Massachusetts, which reported at total of 128 psychiatrists working in prisons (*ibid.*).

Those states having no psychiatric facilities in their prisons usually transfer the obviously psychotic inmates to one of the state mental hospitals. However, the lack of any professional staff within the institutions to evaluate the mental status of prisoners or to make judgments as to which ones are in need of psychiatric treatment, means that there must be many psychotic inmates within correctional institutions who are either not recognized as such, or who are not given adequate treatment. This is evidenced by a comment made in one of the questionnaires to the effect that a particular mid-western

TABLE A

	Total no. of prisons for adults	No. of prisons with special psy- chiatric services	Total no. full-time psychiatrists employed	Total no. part-time psychiatrists employed	Total no. psychiatrists employed <small>(full-time + part-time)</small>	Total no. of consultant psychiatrists at prisons weekly	No. psychiatric beds	No. social workers employed	No. of psychologists employed
Alabama	4	2	—	1	1	—	—	—	—
Arizona	1	—	—	—	—	—	—	—	—
Arkansas	1	—	—	—	—	—	—	—	—
California	7	6	12	6	1	36	214	9	9
Colorado	2	2	—	1	2	30	40	—	1
Connecticut	3	1	—	1	1	50	6	—	1
Delaware	1	1	—	1	—	—	—	1	1
District of Columbia	4	1	—	1	—	—	—	1	3
Florida	2	—	—	—	—	—	—	—	—
Georgia	3	—	—	—	—	—	—	—	—
Hawaii	1	1	—	—	1	—	—	—	—
Idaho	1	—	—	—	—	—	—	—	—
Illinois	4	3	—	1	2	22	500	—	5
Indiana	4	3	—	—	2	28	—	9	2
Iowa	3	2	—	—	2	—	—	1	1
Kansas	3	—	—	—	—	—	—	—	—
Kentucky	3	1	—	—	1	4	—	—	—
Louisiana	1	1	—	—	1	—	—	6	3
Maine	3	1	—	—	1	—	—	—	—
Maryland	4	4	—	3	2	100	14	—	4
Massachusetts	5	5	—	2	5	202	5	21	2
Michigan	4	4	1	1	1	26	104	2	6
Mississippi	1	—	—	—	—	—	—	—	—
Missouri	3	2	—	1	1	—	16	—	—
Montana	1	1	—	—	1	10	—	—	—
Nebraska	3	2	—	—	2	—	—	—	—
Nevada	1	1	—	—	1	—	—	—	—
New Hampshire	1	—	—	—	—	—	—	—	—
New Jersey	6	5	5	—	—	—	—	4	7
New Mexico	1	1	—	—	1	10	—	—	—
New York	15	7	5	4	2	—	52	8	11
North Carolina	4	1	—	1	1	52	3	1	—
North Dakota	2	—	—	—	—	—	—	—	—
Ohio	4	1	—	1	1	120	56	5	5
Oklahoma	2	1	—	—	1	4	—	2	1
Oregon	1	—	—	—	—	—	—	—	—
Pennsylvania	6	5	2	3	2	100	30	6	10
Rhode Island	4	1	1	—	—	—	—	1	1
South Carolina	2	1	—	—	1	—	—	—	—
South Dakota	1	—	—	—	—	—	—	—	—
Tennessee	2	1	—	1	—	—	—	—	—
Texas	6	2	1	1	1	—	40	5	2
Utah	1	1	—	1	—	—	—	—	1
Vermont	2	1	—	—	1	52	—	—	—
Virginia	3	3	1	1	1	40	5	5	2
Washington	2	1	—	—	1	4	—	—	—
West Virginia	3	1	—	—	1	—	—	1	1
Wisconsin	3	3	3	2	—	—	—	8	6
Wyoming	1	—	—	—	—	—	—	—	—
Federal Institutions	17	17	12	5	9	75	540	66	5

TABLE B

PERSONNEL IN PRISONS WITH MENTAL HEALTH SERVICES—BREAKDOWN BY INDIVIDUALS

Psychiatrists, full-time—State Prisons	31
Psychiatrists, full-time—Federal Prisons	12
Psychiatrists, part-time—State Prisons	34
Psychiatrists, part-time—Federal Prisons	5
Psychiatric consultants—State Prisons	42
Psychiatric consultants—Federal Prisons	9
<hr/>	
Total: Psychiatrists doing at least part-time work in prisons.....	133
Psychologists—State Prisons	85
Psychologists—Federal Prisons	5
<hr/>	
Total: Psychologists employed in prisons..	90
Social workers—State Prisons	96
Social workers—Federal Prisons	66

Total: Social workers employed in prisons. 162

institution had a 75-bed psychiatric ward, but there was no psychiatrist working in the institution. This same institution reported that patients in the mental ward were examined once a year by a state hospital psychiatrist!

The situation is not quite as bad as it first appears from examination of the questionnaire returns. In several states, machinery exists for psychiatric evaluation of mentally disturbed inmates in regional mental health outpatient clinics. Two institutions in Iowa have such an arrangement, as does the women's prison in Connecticut.

At the time of this survey, several states which did not previously have satisfactory facilities were rapidly developing an improved program. For example, Mr. Harold Donnell(4), Superintendent of Prisons of the State of Maryland, reported that in October, 1954, Maryland was opening the Patuxent institution to serve as a diagnostic center, psychothpathic unit, and defective delinquency unit. The entire psychiatric staff would be available for work in all the other institutions under the Department of Corrections. This would be similar to the systems adopted in the States of Wisconsin and New Jersey where a central agency furnishes psychiatric services to all the penal institutions in the state.

California, which already was one of the leaders in the use of psychiatric personnel in state penal institutions, was at the time of this study rapidly enlarging professional services for the youth division and had

started an inservice training program for all employees. California has also built reception guidance centers for initial diagnostic studies on all incoming inmates, both for the adult and youth divisions.

An attempt was made to find out the quality of professional staff and adequacy of their training by asking the various institutions whether or not the psychiatrists they employed were certified by the American Board of Psychiatry, or board eligible. Of the 130 psychiatrists reported to be working in our prisons, 53 were reported to be board certified and 27 to be board eligible, for a total of 80 so qualified. However, the number may be slightly higher because a few of the institutions hiring psychiatrists failed to complete this item on the questionnaire.

Only 6 institutions (the State Prison of Southern Michigan, Sing Sing Prison, Massachusetts Reformatory for Women, Connecticut State Prison, San Quentin Prison, and the California Medical Facility at San Pedro) reported that they were utilizing psychiatric residents in their prison programs through arrangements with nearby medical schools. It is felt that there is a widespread lack in the training of psychiatric residents in forensic psychiatry. Many of the major prisons are located near medical centers and arrangements could be easily worked out for psychiatric residents to spend some time in the psychiatric clinics of our prisons and reformatories. All of the psychiatric residents I have talked with who have worked in prisons feel it has been a very worthwhile experience. However, before more residents are utilized in our prison programs, obstacles in two different areas will have to be overcome. First, the various states will have to provide funds for adequate salaries for board certified psychiatrists to work in the prison hospitals, so that there will be sufficient well qualified persons to supervise the residents. Secondly, more medical schools will have to take the initiative in working with the various state corrections departments to set up adequate training programs.

An attempt was made to find out how much individual and group therapy was being carried on. Seventeen institutions reported that they had a sufficiently adequate staff to

carry on individual psychotherapy with at least a few inmates. Twenty-eight of the institutions had group psychotherapy classes. In the remainder, the staff was so limited that the psychiatrist's time was used almost entirely for handling psychiatric emergencies, or else was spent with so many routine duties that no time was left for individual or group psychotherapy. Several institutions utilizing group psychotherapy were quite enthusiastic about it and felt that they were able to make the maximum use of their limited staffs by employing group therapy methods.

Forty-seven prisons reported that they had psychiatric wards within their own hospitals. These ranged in size from small segregation units of 3 beds up to wards of 120 beds. The majority of these were small units, with only 10 institutions reporting psychiatric wards of over 25 bed capacity. The various prisons reported a total of 1,356 psychiatric beds. Institutions for the criminally insane were deleted from this survey so this number represents psychiatric beds in excess of those provided in separate institutions for the criminally insane.

The quality of psychiatric care given in most of the prison psychiatric units is usually far below the standards recommended by The American Psychiatric Association. Eleven of the units with psychiatric wards reported that they had no trained civilians looking after the patients and that this work was done entirely by inmate attendants. Nineteen units reported that they had inmate attendants under the supervision of one or more trained civilian attendants or nurse supervisors. Only 10 units had the entire nursing staff composed of civilians.

Only 31 institutions reported that they had psychiatric reference libraries, and 28 kept diagnostic files on all of their patients according to the procedure recommended by the committee on nomenclature and statistics of The American Psychiatric Association.

Institutions were asked to name any psychological tests or methods which were employed in an attempt to measure all of the most important components of their treatment programs. Tables A and B. C. Ninety psychologists were reported to be working in prisons, an average of less than 2 for each

state in the Union. Eighty-five were reported for the various state prisons and only 5 in federal employment, showing a severe shortage of this particular professional group in the federal system. It is not known whether all of these possessed sufficient qualifications to correctly use this title. In a previous survey of psychologists in prisons in 1932(5) there were 60 psychologists known to be operating in adult correctional institutions. Of this group only 39 were American Psychological Association members.

Ninety-eight social workers were reported to be working in the various state adult institutions and 66 in the federal prisons. Here again it is not known how many of these were adequately qualified by training and experience to properly use this title. Only 34 of the 58 adult correctional institutions hiring social workers reported that they used the "teamwork" type of clinical approach in their program.

Only 8 penal institutions indicated that they had electroencephalographic laboratories. A number of other states made frequent use of the EEG facilities of nearby state hospitals. However, the number of inmates who would have EEG studies as part of their clinical examination would certainly be much less in any institution which had to send the inmate to another facility for such a study. In such cases, these studies would undoubtedly be carried out only in those situations where the person was thought quite definitely to have some sort of neurological disorder.

Eighteen state institutions and one federal adult correctional institution reported that they were carrying on research projects. The paucity of research in the correctional field is due to the chronic shortage of trained clinical personnel. Most of those employed in corrections work have been so busy with urgent immediate problems that they have had no time whatsoever for research. This picture can improve only when more professional persons go into corrections work and individual caseloads are relieved to the extent that not all time is spent in dealing with day to day emergencies or routine administrative work.

With the guarantee of anonymity of the institution and the reporter, the person com-

pleting the questionnaire was asked to indicate whether there were persistent areas of discord with custodial personnel. The majority of institutions with psychiatric facilities answered in the negative. However, the following comments were received:

"The custodial personnel think that working around a person and reasoning with those who have a mental quirk is pampering them—that the minute you say something they should jump and do it—it is most difficult to make the older employees see that you have to work around that type of person."

"Tend to use and want to use psychiatric ward as punishment or to handle disciplinary problems rather than psychiatric cases."

"There are some problems which may be subsumed under the traditional conflict between philosophies of punishment and those of treatment."

"Security more basic to institution than therapy."

An excellent example of the problems encountered when a therapeutic program is first started in an institution where custody has previously been the main orientation, is given in a recent article by Dr. Norman Graff(6). In this he writes up his interesting personal experiences when he began working for the first time in a prison hospital, and met resistances of this sort.

A somewhat similar development took place in the State Prison of Southern Michigan, where a psychiatric treatment program was generally unknown to the custodial personnel prior to 1953. As the program developed, more and more custodial officers developed some interest and understanding of the problem of mental illness in prisoners. Now regular training meetings take place with representatives of custody sitting in on weekly staff meetings in the psychiatric clinic, and with members of the psychiatric clinic sitting in on some of the meetings held by custody for the disposition of inmates' problems.

The problem is by no means unresolvable. In those institutions where there has been an inservice training program with frequent meetings between psychiatric and custodial personnel, these difficulties can be largely overcome. Such meetings allow for a common understanding of objectives and methods and help to break down the misunderstandings about psychiatric treatment that usually exist in custodial personnel who have never previously worked in a therapeutic program.

It is felt by the writer that inservice training programs and group discussions are

essential in overcoming the mistrust of therapeutic techniques where the milieu has previously consisted only of confinement and punishment. Graff(6) also remarked that he felt that the therapeutic program of any prison psychiatric unit stands or falls on the relationship which develops between the psychiatrist in charge of the unit and the officers who translate his ideas into action.

The various institutions were questioned as to whether there was an organized program for training of other civilian personnel in the fundamentals of mental hygiene. Only 23 institutions reported that they had included this in their inservice training program, and these were generally in the prisons with the more adequate psychiatric facilities (part-time or full time psychiatrist).

Many interesting general comments were received with the questionnaires. The majority of institutions felt a dire need for additional psychiatric facilities as judged from the following remarks:

"We need a full time psychiatrist and social worker here and we are trying to get our legislature to set up these positions."

"At this institution we have no provisions whatsoever for mentally disturbed inmates. Neither do we have the facilities in our hospital for handling that type of inmate. In my opinion, it is one of the things seriously lacking in this institution. All our nurses at this institution are inmates trained by our medical staff and are not trained in psychiatric work."

"We're always short of staff to reach effectively all those who need therapy."

From one mid-western state well known for political domination of its state institutions:

"Our trouble is administrative. We have had 6 superintendents in less than 2 years. Basically the evil is political domination and manipulation . . . far too much stress is placed on custody and the physical plant. We are grossly inadequate with regard to professionals and trained personnel."

"We have been handicapped by the scarcity of psychiatrists in this region and it has been impossible to get more than the barest minimum of psychiatric evaluation and consultation on our most seriously disturbed cases. The psychiatrist at the local guidance center is in town only 2 days a week and by necessity must give most of his time to the mental hygiene clinic, since that is the job for which he is hired. Although we feel fortunate in having the facilities of one of our state mental institutions in the immediate locality, that institution is understaffed and has only one psychiatrist for the entire female population of the hospital. These are the only 2 psychiatrists in town that can offer us any time whatsoever. It is the hope of our State Department of Institutions to be able to hire a psychiatrist

1957]

who will be able to visit each of the correctional institutions in the state for several days out of each month. However, this still remains a hope that has been as yet unrealized."

Certainly part of the difficulty lies in the continuing shortage of psychiatrists and the inability of some institutions to hire trained personnel even when the legislatures have made appropriations for such positions. For example,

"At the present time, we have no psychiatrist on the staff here at the penitentiary. Certainly, we have quite a number of inmates who would be benefited by the services of a resident psychiatrist. However, up to this time, we have been unable to employ one."

Although this survey was limited to the adult institutions, some of the comments from the institutions for juvenile delinquents revealed the problem there to be equally pressing:

"We do not take mental defectives or badly disturbed children if we can help it, but the last year we have had plenty of them. We would like very much, if we have to run an institution for mentally ill children, to have a full time psychiatrist. This should be one or the other institution—a training school or a mental hospital, but not both!"

"We find that as welfare services in our state have increased and more services to children are available in the communities where youngsters live, there has been a screening process going on whereby the milder delinquents that we used to receive are not now being committed to the training school—because their problems apparently can be successfully handled by the newly developed services in the various communities. Although we think this is very fine it does present a problem, inasmuch as the complexion of our population has changed almost entirely in terms of the severity of problems presented by boys as they enrolled. We feel that we are now receiving boys who present emotional and mental abnormalities in large numbers, to the extent that these abnormalities are socially disabling. We also receive some children who are psychotic, others who might be termed pre-psychotic, and we do not feel that a training program alone can meet the needs of the youngsters we are called up to care for. Hence our decision to seek a psychiatric unit and to add all the auxiliary services usually required."

SUMMARY

On the basis of this survey in 1954, only 43 psychiatrists were working full-time and 39 part-time in the 167 prisons and reformatories of the United States and possessions. In addition to this small group, there were 51 working in a consultant capacity. How-

ever, some of these rendered only token services to the prisons by making visits less frequently than once a month. Twenty-four states plus the Territory of Hawaii had no psychiatric facilities in their prisons, or else had no services except for occasional visits by psychiatric consultants.

It is obvious that the psychiatric study of the criminal offender is still a largely neglected field. Despite the increasing recognition that many repetitive offenders are mentally ill and that criminal behavior stems from unconscious conflicts, very few criminals actually receive thorough psychiatric study or treatment. The level of care rendered to the mentally ill person in the prisons of many states is still at no higher a level than was common in the average asylum of 100 years ago. From the humanitarian standpoint alone, the level of care provided to the mentally ill in prison should be made to approximate that given in the average state hospital. There is no less a need for additional research in this field, inasmuch as the average state now has to allow as much in its budget for the care of criminal offenders as for the maintenance of its mental institutions.

Settle(7) feels that the best way to better treatment for the abnormal offender is through the expansion of psychiatric services in the correctional system rather than through changing concepts of criminal responsibility. This is the most that can be hoped for at present, since it will certainly be some time before there is any widespread change in the concept of criminal responsibility which would permit a sizeable proportion of such offenders to be screened out in the courts and sent to hospitals for psychiatric treatment(7, 8).

BIBLIOGRAPHY

1. Overholser, W. *Ment. Hygiene*, 12:801, Oct. 1928.
2. Powers, E. *Correctional Research Bulletin* N. 5, Boston: United Prison Ass. of Mass. 1954.
3. Personal Correspondence.
4. Personal Correspondence.
5. Corsini, R. J., and Miller, G. A. *Am. Psychologist*, 9:184, May 1954.
6. Graff, N. *Bull. Menninger Clin.*, 20:85, March 1956.
7. Settle, R. O. *J. Social Ther.*, 2:224, 1956.
8. Fortas, A. *Am. J. Psychiatry*, 113:577, Jan. 1957.

OBSERVATIONS ON THE THERAPEUTIC ASPECTS OF ADMINISTRATION IN PUBLIC MENTAL HOSPITALS¹

WALTER E. BARTON, M.D.²

CHARTING A COURSE

How can time possibly be found in a state mental hospital for psychotherapy? There are so many patients to be cared for that it is difficult to find time even for essentials; an hour spent with a single patient is a luxury seldom possible. The urgency of demands for service is indeed very great. The admission of patients, their examination and work-up, the development of a treatment plan, diagnostic and service staff meetings are all very time consuming as is the actual application of such treatment as electric shock, insulin, etc. Ward rounds also are time consuming, especially if there are few doctors and many wards and patients. There are assignments to be made of patients to activities, permissions to be granted, and a hundred and one administrative tasks to perform. Visitors and relatives also demand to be seen. There just isn't enough time in the day.

There is time for what is really important. But what is important? For some, the appearance of wards will be; for others, the nursing care given to patients; and perhaps for still others, the amount and extent of therapy that can be given. All are important, of course, but if a choice must be made within available resources, perhaps therapy deserves the greatest emphasis. It is certain that what the administrator feels is important will influence those about him and help certain things to get done. If therapy is a major goal of the administrator this will be known. If he regards psychotherapy as an extravagant waste of time, impossible in the setting of a state mental hospital, it will not be done.

¹ Read at the 113th annual meeting of The American Psychiatric Association, Chicago, Ill., May 13-17, 1957.

² Superintendent, Boston State Hospital, Boston, Mass.

GETTING PEOPLE TO WORK TOGETHER

There are many different forms of hospital organization and different ways in which administrators get policy into action. For example: having decided that it was a good idea to have "psychotherapy," the administrator might issue an order that all doctors will spend an hour a day with a patient in individual therapy and an hour a day with several patients in group therapy. A better approach would be for the administrator to explore together with physicians their convictions as to the relative importance of psychotherapy in the treatment of the psychotic patient. A demonstration project might be set up utilizing those doctors who are most sympathetic to the point of view selected for the demonstration. Progress of the patients in therapy should be "fed back" to the group and encouragement given to others to share in the work. Provision should be made for supervision and guidance of the psychotherapists by more experienced men.

The administrator need not retain active direction of the project. This can be delegated to the clinical director or to qualified chiefs-of-service. It is important when delegating responsibility that the necessary authority be given to accomplish the objectives. Over-ruling and under-cutting are extreme hazards and may nullify any program. The administrator must be very careful to resist the temptation to make decisions that should properly belong to others. His support of those who carry the responsibility is an absolute requirement.

Let us consider a few examples of stress: a patient in psychotherapy may become destructive. An order might be issued to restrain the patient, or the administrator might rather express his concern over the patient's disturbance to the administrative physician and let him in turn discuss it with the patient's therapist as a reality problem to be dealt with in therapy. Electric shock, chemo-

therapy or deprivation of privileges may be employed when crises occur. Demands that they be used in place of psychotherapy, or in addition to it, may make the therapist believe the administration actually does not trust psychotherapy or believe in it.

Sometimes, however, authority can be a useful tool in the treatment process. A patient may often be helped by setting limits that clearly show that his behavior and conduct are socially unacceptable or that certain things must be done in the hospital setting for the well being of the whole group.

PRESSURE FOR CERTAIN TREATMENTS

Today, nearly everyone is interested in psychiatry. The mass media contain many references to the treatment of mental illness. Popular magazines and women's journals tell of successful treatment of mental disorders. People as a consequence, demand that their relative have the kind of treatment they have read about.

Usually the treatments extolled are those somatic therapies that express the elusive hope that a brain operation may cut out mental illness or a pill may give courage to meet stress and overcome frustrations. Furthermore, relatives see John Doe recover from shock treatment. They request, with a great deal of pressure, that their relative also have it. Psychotherapy, oftentimes, is disregarded as effective treatment because "talk doesn't count." It is not uncommon for the patient and the relative to feel that "nothing is being done for him" when only an hour a day is spent in "conversation."

Patients in psychotherapy may experience an increase of anxiety or may express their hostility, not only to the therapist but also to relatives. When a patient has been quiet, regressed and chronically ill, this may prove alarming to the family. They beg that psychotherapy be stopped because "it is making him worse." Oftentimes, dissatisfied with the explanation of the physician, they may go directly to politicians or to the Department of Mental Health and demand that the patient be transferred or be left peacefully alone. Doctors make a mistake, however, in interpreting inquiries on the part of politicians or mental health authorities as being

critical of the treatment or demanding change. Usually the governmental official wants a prompt, clearly stated answer that he can understand and believe, that will satisfy the constituent who is putting pressure on him. Almost always, service to the public official, promptly given by the doctor, will gain an ally that will support rather than hinder his work. It is important for the administrator to permit the physician to direct the medical treatment of his patient and to give him the needed support.

One of the functions of the administrator is that of facilitation. He must remove the "road blocks" and frustrations that interfere with getting a job done and do everything possible to make it easier for the therapists to function comfortably at their work.

Resistance to psychotherapy sometimes develops within doctors themselves. Sitting in intimate daily contact with psychotic patients may arouse their own anxiety. Protests against the pressure of paper work, or being tied to a desk by administrative details, may often be the projected expression of a desire to escape the anxiety evoking therapy hour. The administrator, being aware of this, can encourage a realistic approach toward working through problems with the supervisor of psychotherapy. Competent supervision is most important for those who are doing intensive therapy.

The personality of the one in authority influences the organization as much as does his interest. It determines the way in which the administrator functions and how he meets his own needs. He has many roles to play: clinical psychiatrist, consultant, leader in the hospital and in the community, husband and father. In the hospital he listens to a department head bemoan the fact that a cook has been caught walking out with a ham, or to a relative complaining about a patient's lost glasses. He reads a doctor's memo about a patient who remarked in group therapy that an aide abused him or reads a report from the chief nurse that some man was in the nurses' quarters after hours. While he is doing this, he has answered a telephone request to authorize the retention in the hospital of a patient from out of district or a request to speak to a volunteer group. While he talks on the

place he runs the mountain of correspondence reports, and forms, and after stuffing all letters, over one page long, in his brief case along with reports and journals, he runs the gauntlet of "corridor conference" requests.

Executives in industry have found the psychiatrist may meet his need for help with personal problems or for the opportunity to clarify business problems. The "lonely" executive has no one to whom he can ventilate his problems. The mental hospital administrator could well "take some of his own medicine." It may help to consult with a psychiatrist in the community, (who is not a member of the staff) about his own problems. What he expects from life, what share of it shall be his family's, and what acceptable ways he may need to release tension are legitimate areas for help. Greater use could also be made of consultants who are experts in the various fields of administration.

There is an obligation upon the therapist for an evaluation of the results of his intensive work with the psychotic patient. Does psychotherapy do any real good? The therapist may be the only one who believes the patient has changed for the better. It may be helpful to learn what others think, by eliciting the opinions of ward personnel and patients through interviews or questionnaires. A rating may serve to objectify change. It is interesting that when psychotherapy is one of the basic instruments of treatment, the patient often feels that he knows his doctor, that there is someone who cares, someone who has patience enough to be with him day after day. He frequently leaves the hospital with a very warm feeling that something *has* been done for him.

Clinical reports, careful research analysis, or administrative measures to determine the number of patients who have gone to better wards, who have been occupied in activity programs, or have become less destructive, or left the hospital and gone into the community, may be of value in making a determination whether or not a particular kind of treatment is helpful. The administrator can encourage such evaluations in medical departments, just as in the business departments. It is always well to make a medical

audit(1) to see if one is using one's resources to the maximum benefit of all concerned. Evaluation of results may lead to the wisest use of limited resources, and there is nothing more limited than the physician's time.

ADMINISTRATIVE ORGANIZATION FOR EFFECTIVE FUNCTIONING

In using the analogy of psychotherapy as an expression of administrative philosophy, we have tried to show that this becomes a determinant of administrative policy. Effective functioning of an administrative organization depends on more than articulate policy. It depends on the interrelationships within the determined program between personnel needed and available and the necessary financial support to supply the needed tools and facilities.

Any program begins with clearly defined objectives that are the expression of the administrator's purpose. The good mental hospital is the one whose purposes clearly give priority to therapy and rehabilitation of patients, and have as associated goals, the training of all personnel. The good mental hospital will also encourage research interests. Not many mental hospitals, as they are presently staffed, will be able to undertake elaborate scientific studies, but most will be able to do clinical investigations and evaluations of services.

The planning for an administrative program is best explored in a "grass roots" conference involving the action personnel. This is far more time consuming than the promulgation of a prepared plan. When suggestions for solutions of problems come from the group affected and when that group shares in the development of the plan and the policy, there is more willingness to work constructively toward the goal. It is helpful, therefore, to organize a working committee of representatives of the particular group affected by any procedure. It is disturbing to morale to invite workers to conferences where it is evident that their ideas and thoughts are not heeded or wanted. Their suggestions are solicited, listened to, and distilled into a plan submitted to department heads or to an executive council. After discussion at this level, the amended plan is

again circulated as a policy draft to see if statements made represent what participants thought they said. When it meets the approval of the majority of the action persons, it is published as policy. This does not end the procedure, for at this point careful follow-up is required to translate paper plans into patterns of behavior and into an administrative program.

Any plan made must be studied for its effectiveness in operation. This may be done in a number of ways. The leader may visit and talk to patients and employees, manifesting an interest in their problems and invite their suggestions for improvement of operation or criticism of the procedure as presently carried out. It is possible also to sample its effectiveness through the construction of some measuring device, a time study, the number of man-hours it takes to do the job, the use of a questionnaire, the study of its functioning by a sociologist, or by the securing of the opinion of a group affected by the program.

LONG RANGE PLANNING

Planning begins with the simple assessment of how the job can best be done with the means at hand. The study of the problem includes an analysis of possible solutions and their consequences. Next, one determines what is most needed to do the job better, and lastly how the job could best be done if all needs were met and resources supplied. For new and radical approaches, it may be well to assemble a "board of dreamers" and encourage them to speak freely of even their "wildest" solutions. Some of the long range plans that have emerged demonstrate how administrative planning can actively affect the therapeutic program.

1. It is suggested that an attempt be made to expand the family doctor's knowledge of psychiatry and competence in dealing with psychiatric disorders so that he may be able to abort crises and give the patient enough support to manage his own problems.

2. The Boston State Hospital will explore the feasibility of a home-care plan for patients with an acute psychiatric illness. It has been learned that a certain proportion of admissions are referred from home when a critical point is reached in the relationships

between members of the family. Perhaps a psychiatrist and a social worker going to that home can give sufficient supportive services to maintain the patient.

3. Outpatient and aftercare clinics can be expanded to meet needs only if there are more therapists available. Perhaps it will be possible to utilize time of staff physicians more in this part of the program, if home care plans and other preventive programs reduce admission pressure somewhat. Part time physicians can also be of service at this point to increase outpatient resources.

4. Intensive treatment for those requiring inpatient care can be given more promptly. There is often a period of observation and delay in the application of individual treatment. Every new patient requires immediate intensive study and symptomatic treatment to relieve suffering and potential disturbance. It is felt highly desirable also to involve the family as early as possible after the patient is admitted. Perhaps it would be helpful to invite the family to participate in the active care of the patient on the ward so that they may learn from association with other relatives and with staff what actually goes on within the hospital setting. Instead of bridging the gap between the hospital and the community, an attempt is thus made to keep the gap from occurring.

5. Patients can share more in the responsibility for their own treatment and can plan their own participation in the program. There has been an active interest in the development of patient government, of patient groups, and of patient committees that give them a voice in planning.

6. The staff also needs an opportunity to form close interpersonal relationships with a few patients. If small groups of patients have close contact with staff, there is often open expression of hostility, seductive behavior, or anxiety. Close contact brings problems to the surface where they can be more effectively dealt with. This requires more support of action personnel by experienced supervisors in order to deal with the therapists' personal anxieties(2).

One project of this type at the Boston State Hospital is known locally as "The Forward Look." Formerly when patients had become quiet and cooperative, they were

given responsibility for self care; one attendant was available on one shift of the day for 100 patients in an open building. However, it was learned at the critical point of convalescent status the patient needs more active staff support to continue the forward movement toward return to the community. Ten patient groups of 10 each were formed with an aide, nurse, or other staff person designated as the group leader, who met with the group regularly at least once a week. The releases from the ward doubled as a result. It was necessary also to provide a group leaders' meeting in order that support could be given to the aids and nurses working closely with patients.

7. Early release of patients is facilitated after a chronic mental illness through the provision of support during the period of transition from hospital to community. Sometimes the night plan is effective. The patient goes to work during the daytime and returns to the hospital at night. Oftentimes the patient may be ready to work in the community long before he can face the prospect of living in stressful home situation surcharged with the emotions of unresolved conflict; or he may be without resources. To abandon him to a lonely room would be the worst possible therapy. A halfway house, a family care home, or a "day hospital" plan may be the solution.

8. At some point in the development of the patient's treatment, vocational guidance plays an important role as he begins to think about the actual work he will undertake. At this point, hospital industrial placements often fail to actually prepare patients for work in the community. Intensive job training may be needed to develop work habits

at a level acceptable in the community. His habits of personal cleanliness become a concern as does his punctuality in reporting for work. Steadiness and dependability are needed and the capacity to work a full 8-hour day. In the atmosphere of support within the group, and with good supervision, the patient is able to accept constructive criticism more readily, and to dare to try out new patterns of behavior which he learns through repetition.

9. After the patient returns to the community there is need for follow-up supervision. The mental hospital doesn't deal only with the needs of its patients but also with the attitudes of family and of employers and other problems of adjustment in the community. The support of the social worker or his therapist, or of his group in therapy, or of a patient social club may be needed to give him confidence to meet these daily problems.

Any administrator who lives in the climate of planning with the responsibility for carrying out any program must look to the future and anticipate changing needs. Into his planning folder go ideas that later become crystallized into administrative decisions that will influence therapy. Administrative philosophy becomes translated into programs of treatment and human relationships are stimulated toward the achievement of the common goal of better patient care.

BIBLIOGRAPHY

1. Lee Sewall, M. D. and Henry Davidson, M. D. *Am. J. Psychiat.*, 113: Aug. 1956.
2. William Lundin, Ph. D. Report of progress covering action research on high personal contact at Chicago State Hospital.

CONTRIBUTIONS OF SOCIAL SCIENCE TO THE ADMINISTRATIVE PROCESS IN THE MENTAL HOSPITAL¹

MORRIS S. SCHWARTZ, Ph.D.²

In order to establish the context for my remarks about the contributions a social scientist can make to the administrative process in, or to the administrator of, a mental hospital, I would like to start with a brief definition of administration and with an exposition of an assumption.

When I use the term "administrative process" I mean simply the process of exercising authority, making decisions and putting into effect the decisions made in order to achieve a desired goal. In a mental hospital the stated and hoped for goal of the administrative process is the immediate or ultimate elimination or diminution of the patient's mental illness or the improvement of his mental health. In discussing the contributions of social science to this process, my remarks will be oriented toward indicating the ways in which social science might increase the therapeutic effectiveness of the administrative process, or diminish its untherapeutic effects.

There is an assumption behind the thesis that administrative processes can have important therapeutic and untherapeutic effects on patients. Let me make this assumption explicit. I am assuming that for a large majority of patients in mental hospitals, the social environment of which they are a part will play an important, sometimes crucial role in alleviating or improving their mental illness or in reinforcing or worsening it. The administrative process is part of this social environment and helps create the atmosphere in which the patient lives. Thus it affects and influences staff and patients and will have therapeutic, neutral, or untherapeutic consequences for the patient population.

I am maintaining that administration in the mental hospital is not only a process that

requires clinical psychiatric skills, but that it is also a process that requires social science skills. If the mental hospital administrator is to facilitate optimal therapeutic care for patients, he will have to use, directly or indirectly, the concepts, knowledge, and methods of the social sciences.

In what ways then can a social scientist contribute to the administrative process in the mental hospital so as to increase its therapeutic effectiveness?

In general, the social scientist can provide a frame of reference within which to analyze, interpret, and evaluate administrative action; and he can provide a mode of procedure with which to observe and trace the consequences of such action. In this paper, I will elaborate 3 areas in which the social scientist can make his specific contribution. First, I will indicate the kinds of perspectives he can bring to bear on the formal structure of the mental hospital. I will next concern myself with how he might go about analyzing the informal social interaction in the hospital. Finally, I will indicate how the method of participant observation can be used in evaluating the effects of the institutional structure and processes on patient welfare.

Let me start with the formal aspects of the hospital, that is, with the way in which the institution is organized internally, and with its image in, and relations to, the society in general. On the most general level, we might ask: what function does this institution serve for the society and how is it related to the community; what kind of a social system is it; that is, what patterns, orientations, norms and values most regularly characterize it; what are its subparts and how do they interlock and fit together? We can then go on to ask whether this social organization as it is presently constituted actually functions to achieve the ends it has set for itself. For example, we might ask if a large scale social organization with its attendant administrative ma-

¹ Read at the 113th annual meeting of The American Psychiatric Association, Chicago, Ill., May 13-17, 1957.

² Address: 868 Memorial Drive, Cambridge 39, Mass.

chinery: its complex division of labor, its specialization in task performance and its isolation from the community is an appropriate kind of institution within which to treat the mentally ill(1). If one assumes that emotionally sick people need highly individualized and personalized care and treatment, we can then try to delineate ways in which a large state hospital, as a social system, is capable of fulfilling this goal; or, one can ask, how such a hospital might be re-organized so as to more closely approximate the goal of maximizing its therapeutic effects. One advantage of approaching the hospital as a total system, and seeing it as an institution embedded in the community and society, and in terms of its own internal structure and dynamics, is that an administrator can make an important distinction among the problems, difficulties and untherapeutic processes and structures that confront him. He might be able to distinguish between untherapeutic processes which stem primarily from societal limitations placed upon him and the hospital, those difficulties that are intrinsic to the form and social organization of the institution as a whole, and those problems that arise primarily because of the ways sub-parts of the institution are structured, operate, and are related. Having made this kind of differentiation the administrator may be in a better position to realistically assess: 1. the relative control he has over the various aspects of hospital functioning, 2. the limitations that restrict his power to make and effectuate his decisions, 3. the possibilities of introducing successful change into those areas he thinks need to be changed.

Another way in which a social scientist can contribute to the understanding of the formal structure of the mental hospital is by focusing on its goals and purposes(2). The mental hospital like any other complex organization may pursue a variety of goals. By his analysis, the social scientist might distinguish those goals that are manifest, are made explicit, or are verbalized as primary, from those goals that are latent, thought to be secondary or enter into the scene unrecognized.

For example, the goal of the mental hospital is ordinarily stated as the cure or im-

provement of the patient. This goal is even implicit in the term "hospital." Rarely is the goal of the hospital stated to be the storage of people who do not abide by our conventional standards, or to be a place of terminal maintenance for persons who are too old to care for themselves. Identifying and clarifying the variety of goals that actually are being pursued might help the administrator to be more realistic about his institution and the reasons for its moving in seemingly divergent directions.

After identifying some of the different purposes a mental hospital is pursuing, the social scientist might indicate the incompatibility between or conflict in, values. For example, there may be a conflict between the needs of the staff and the needs of patients. Thus, patients may be prevented from using their rooms during the day because it is more convenient for the staff to have patients in full view. Or locking the patient up tight in order to zealously protect society from him, may be incompatible with helping him to believe that you trust him and are interested in his welfare. Or organizing the patient's life via routines, orders, and procedures, and regulating his waking and sleeping hours in order to keep the hospital running efficiently, may be incompatible with giving him the responsibility and opportunity to develop his self-reliance and independence. Recognizing such incompatibilities should help the administrator recognize some of the reasons for his indecision and keep him from being torn in different directions. It might also help him recognize the necessity for developing a hierarchy of values, and for distinguishing and seeing the relations between long-range and immediate ends.

The social scientist can also contribute to the clarification of the relation between means and ends. For example, the means used to distribute patients throughout the hospital, by putting patients together who are like each other, *i.e.*, housing excited combative patients, or depressed suicidal patients together, may only result in frustrating the end of helping these patients reduce or eliminate this unacceptable behavior.

Another way in which the social scientist can contribute to an understanding of the effect of the formal organization on patient

welfare is by focusing on the division of labor in the hospital, and the way in which roles are defined and stratified, *i.e.*, how people with different jobs have different amounts of prestige and power and accumulate differing rewards because of their position in the hospital. This focus might lead to an evaluation of the intended and unintended consequences of the division of labor. For example, it might be important to ask whether the ways in which mental hospital personnel are arranged in hierarchical relations to each other, namely the doctor on top, the nurse below him, and the attendant below her, contributes in part to social distance between staff members and to poor communication between them. We then need to ask if this in turn contributes to avoidance of patients by staff and to poor communication between patients and staff. Such restraint in social relations and inadequate communication among staff might make it difficult for the administrator to get the kinds of information he needs to make appropriate decisions. Another problem is whether a subordinate, subject to the orders of many superiors, for example an aide who takes orders from the doctor, the nurse supervisor, and the charge nurse, may become recurrently confused because of his being subordinate to multiple authorities, and as a consequence contribute to the confusion of patients (3). If the various roles are structured so that they encourage or facilitate resentment and lack of satisfaction among the lower echelon personnel, it will be difficult, if not impossible, for them to provide patients with the kinds of satisfactions they need in order to improve. If the administrator recognizes the importance of the ways in which roles are defined, how they are related to one another and the consequences of such definitions and relationships, he might concern himself with re-defining roles or restructuring hierarchical relations. If, however, he takes these for granted and doesn't conceive of the possibility of changing them, the very persistence of these roles in their present form might make it impossible for him to achieve certain ends.

Finally, in analyzing the formal structure, the social scientist might turn his attention to the assumptions upon which it is based

and upon which the administrator proceeds. Administrative action is not only a function of the seeming demands of an immediate situation, but is also determined in part by the assumptions the administrator is making, the philosophy of treatment he holds, the traditions and ideologies by which he is bound, the theories of human behavior in which he believes, and the norms and values that guide his activities. Usually these determining conditions, especially one's assumptions, are implicit and taken for granted. The function of a social scientist might be to make them explicit, to see how they are structured into the institution, and what their consequences are in concrete action. Let me illustrate. If the administrator assumes that mental illness is essentially like physical illness and that the general hospital should be the model for the mental hospital, he will undertake different acts and make different decisions from those he would make if he assumed that mental illness is essentially a psycho-social disability and that treatment should be patterned on the model of the family. Similarly, if an administrator assumes that schizophrenic patients cannot be expected to recover, he will make decisions different from those he would make if he assumed it is a reversible process.

In addition to analyzing the formal structure of the mental hospital the social scientist can contribute to the administrative process by uncovering the different kinds of patterning the informal structure assumes and by evaluating the consequences of such patterning for patient welfare (4, 5). For example, he might investigate the emergence and disappearance of collective disturbances in the hospital (6, 7); or he might focus on the ways in which low morale becomes structured, how it is maintained in the informal organization, and what the processes are that help to raise it (8). Perhaps more important are the kinds of equilibria that become stabilized in the interaction between staff and patients. There are some types of informal patterns that become stabilized that tend to perpetuate the patient's "sick" behavior. For example, a patient's incontinence or his demanding behavior may be elicited and perpetuated by the kinds of responses he receives from staff, and by the

which their interpersonal relations are patterned (9, 10). Careful analysis of such informal processes arise, the forms through which they pass, the forms they take, and the ways in which they disappear may be of considerable use to the administrator in helping him evaluate how these informal processes might be aborted, used, or re-directed for therapeutic ends.

Finally, the social scientist could help the administrator by providing a procedure for gathering information and data he needs in order to make appropriate decisions. Through the use of participant observation, interviewing, questionnaires and conference discussions, the social scientist can systematically observe and record the formal and informal structures and processes in the mental hospital. He can then provide the administrator with a careful, detailed and intimate study of the institutional processes about which he has to make decisions. On the basis of this detailed information and analysis, the administrator might be in a better position to delineate the vulnerable points at which to intervene, to time his decisions more appropriately, and to work out a form and structure for the process of intervention itself which might have an increased probability of achieving the therapeutic ends he is seeking. When the administrator does intervene, the social scientist can observe how the intervention is instituted, and evaluate its effect on the social structure and on the patient's welfare. He can bring these evaluations to the administrator's attention with whatever suggestions he might have for future interventions. Thus, through continuing observation and feed-back, the social scientist can provide current, on-going and pertinent information to the administrator that will keep him *au courant* with the social processes about which he is making decisions.

BIBLIOGRAPHY

1. Henry, Jules: *Psychiatry*, 20: p. 47, Feb. 1957.
2. Greenblatt, York and Brown: *From Custodial to Therapeutic Care in Mental Hospitals*, Russell Sage Foundation, 1955.
3. Henry, Jules: *Psychiatry*, 17: p. 139, 1954.
4. Rapoport, Robert N.: *Human Relations*, 9: p. 357, 1956.

5. Caudill, Wm., et al.: *Am. J. of Orthopsych.*, 22: p. 314, 1952.
6. Caudill, William, and Stainbrook, Edward: *Psychiatry*, 17: p. 27, 1954.
7. Stanton, A. H., and Schwartz, M. S.: *The Mental Hospital*, Basic Books, 1954.
8. Schwartz, M. S., and Will, G. T.: *Psychiatry*, 16: p. 337, 1953.
9. Schwartz, M. S., and Stanton, A. H.: *Psychiatry*, 13: p. 399, 1950.
10. Schwartz, M. S.: *Patient Demands in the Mental Hospital Context*, to be published in *Psychiatry*.

DISCUSSION

MARVIN L. ADLAND, M.D. (Rockville, Md.).—Because there is sufficient truth in all the concepts that Dr. Schwartz has presented, I was tempted to confine my discussion to a brief sentence extolling the neat and concise manner in which the author presented the potential contributions of social science and of a well trained sociologist to the problems of a mental hospital administrator. I found I could not confine my contribution to that approbation because Dr. Schwartz's thoughts provoked a number of most disquieting rumblings.

First I found myself becoming angry with myself and my colleagues who are doing institutional work. Those psychiatrists who devote to hospital psychiatry more than the 3 resident training years required for Board examinations soon become part of a broad and respectable history. There are few books on how to run a mental hospital. The philosophy, the traditions, the knowledge of the problems and the patience to meet those problems, have been passed from colleague to colleague, almost in a master to apprentice fashion, over a space of many generations. And now, almost all of a sudden like, we seem to stare around us stupidly, unknowingly, clutching at every closely or remotely allied discipline to give us the answers, to show us our blunders, to explain our motivation and behavior. What does this semi-paralysis of cerebral function indicate? But before I answer let me go on with another general area of rumbling.

This second area is that of my feeling that perhaps many of the sociologists (and other allied disciplines) who come to be a working part of a mental hospital, do so with the attitude of having to change what is going on. Now mind you, I'm all in favor of changing a lot of things that do or don't go on. But when I make this change I want it to be based on my experience and understanding of the life and function of a mental hospital. Now if the sociologist wants to tell me about his impressions of his observations from his particular point of view, that's fine. I don't find myself intrigued by his observations when they are presented from my psychiatric point of view. Now I'm not saying that this is what Dr. Schwartz was trying to do. I am saying that this may constitute one of the dangers in the relationship and to avoid the harm of this danger, we must recognize its presence.

Now the last major area of rumbling inside of

myself was a feeling that if I knew all that Dr. Schwartz was saying about what a sociologist could contribute to my understanding, I'd pull up stakes and go back into general practice. If all the frills of the evening dress of the formal structure were clearly delineated, if all the dirty linen of the informal structure was exposed, if all the strivings and problems of roles and status were in focus, then the hospital wouldn't be worth a damn—it would have no personality, it would be dead. You can't reduce the behavior of people to a concept of "role playing." You can't put the strivings, hurts

and needs of people into words such as status and power. For me that's too mechanical. I don't want that much analysis.

Well, what does this all mean? To me it means that whatever one's relationship to a mental hospital is, it is difficult. Just as difficult as being a part of any community. And when we get anxious, we start scurrying around to get the efficiency experts to help us with time and motion studies. What we forget is that part of being human is knowing that there is anxiety, and that there are things we don't know.

HEALTH INSURANCE AND PSYCHIATRIC COVERAGE

COMPILED BY HENRY A. DAVIDSON, M.D.¹

A symposium on health insurance and psychiatric coverage featured one of the May 14 sessions of The American Psychiatric Association's 1957 Annual meeting. The speakers were:

1. Mrs. Edith Alt, Consultant on Community Resources, to the Health Insurance Plan of Greater New York. Mrs. Alt spoke on Consumer Need for Insurance Protection for Psychiatric Care.

2. Louis S. Reed, Ph. D., Health Economist, U.S. Public Health Service. Dr. Reed spoke on the present practices of health insurance plans with reference to psychiatric illness.

3. Mr. Harry Becker, Staff of New York Blue Cross. Mr. Becker's topic was "Psychiatric Services under Labor-Management Health Protection Programs."

4. Mr. John R. Mannix, Executive Vice-President, Cleveland Hospital Service. Mr. Mannix discussed Cleveland's experience with psychiatric coverage under Blue Cross.

5. Mr. Albert V. Whitehall, Associate Director for Health Insurance, Life Insurance Association of America. Mr. Mannix spoke on "The Problem of Broad Coverage."

These five papers are abstracted below.

MRS. EDITH ALT

Mrs. Alt suggested that the challenge of providing ambulatory psychiatric care for low and middle income groups may well head the list of today's unresolved health problems. The range of "psychiatric" problems is as broad as life itself. Marriage counseling, vocational guidance, trouble in reading, juvenile delinquency, these all might be considered appropriate for psychiatric referral. However, as a practical matter, it seems best to limit the phrase "psychiatric need" to "illness" in the clinical sense. Any systematic method that will bring to consumers the kind of treatment required is bound to have a profound effect upon the practice of psychiatry and contribute to a more productive

use of so valuable a service. Mrs. Alt referred to experience with the Health Insurance Plan of New York. This provides psychiatric consultation service. The subscriber has the benefit, without any financial barrier, of early detection and diagnosis. However, the Plan does not include psychiatric treatment.

Among Plan subscribers, 90% of the heads of families have incomes of less than \$7500 a year and 90% of the unmarried subscribers have incomes of under \$5000 a year. The patients who have been given psychiatric diagnoses here include some really sick people who are still ambulatory. Psychiatrists, whether in clinic or in private offices, say that these people are unrewarding to work with. Other problem cases are: seniles who need supportive care; persons of all ages who require immediate attention to meet emotional crises; a group who, with intensive treatment, could actually avoid hospitalization; some whose emotional needs are interwoven with medical problems (including subscribers with amputations, allergies, peptic ulcers and heart disease) who need integrated treatment and other people whose ability to function is so impaired that they need psychiatric attention to attain self-sustaining levels of living.

Failure to provide psychiatric treatment reinforces the idea that there is something special or different about emotional illness. The exclusion serves to stigmatize mental illness. Other physicians, whose specialties *are* covered, get the feeling that psychiatry must lie outside the pale of medicine.

Only 10% of America's population is in a financial position to "buy" psychiatric care on the traditional "fee for service" basis. Thus 90% of our fellow-citizens must look to the Government or private philanthropy to help them; or they borrow and build up a crushing burden of debt; or they just go without treatment.

The inability of many medical care programs to include psychiatric service is due to the high cost of this service and its

¹ Essex County Hospital, Cedar Grove, N. J.

scarcity. However, with the increasing movement from care predominately within hospitals to the newer trend toward community care, we see a significant change. With more knowledge on the part of the consumer, encouraged by reports of shorter treatment periods, and more emphasis on early case-finding we can expect that more people with psychiatric illness will come for treatment and at an earlier point in the illness. Insured families, regardless of income, are more likely to utilize the service than uninsured families in the same financial bracket. Thus, insured persons will have their psychiatric needs assessed at an earlier point.

In Mrs. Alt's opinion, only one plan has been able to include adequate ambulatory psychotherapy. This is the Health Insurance Fund of West Berlin. This program insures 750,000 people. Though focused on the ambulatory patient, this agency also accepts for follow-up, some ex-hospital patients after discharge. The program covers psychosomatic illnesses, psychoses, and psychoneuroses. Both individual and group psychotherapy are available.

How much of a drain is psychiatric treatment on the resources of the fund? This is the problem which seems to trouble insurance carriers here. The answer is 1%. That is, of West Berlin's insured load, 1% are ambulatory patients receiving psychotherapy.

The fund provides for 200 treatment hours for each patient who needs it. Each month they see about 150 new adult patients and from 50 to 60 new children per month in a reception unit. This unit reports that one-third are not treatable; one-third have a good prognosis and one-third are in a borderline category. Those considered "not treatable" are referred back for supportive psychiatric care or social care. The one-third with a good prognosis are generally accepted and the one-third who are considered "borderline" are studied more carefully to determine whether they can be helped.

The waiting period between acceptance and the beginning of treatment is usually about 3 months.

They aim at time-limited psychotherapy, trying to get results in 100 treatment hours. Patients are seen 2 or 3 times a week, to a general maximum of 1½ years. The care-

ful and comprehensive character of their screening seems to be the crux of their plan—that and the "time-limit" aspect of psychotherapy. It cost the Institute about \$180 a year for each patient in psychotherapy.

In this country, current pressures for additional and more available psychiatric services can push us toward government responsibility for all forms of psychiatric care. There is another possibility, more consistent with our evolutionary social process: to work for a partnership of cooperative voluntary effort, government and individual responsibility. In this choice lies the challenge for all of us concerned with the health of our people.

DR. LOUIS S. REED

Dr. Reed pointed out that there are 4 principal groups of health insurance plans in the United States: (a) Blue Cross plans; (b) Blue Shield plans; (c) insurance companies writing health insurance policies; and (d) company and union self-administered programs, cooperative and community plans and private medical group clinic plans.

About a third of the Blue Cross plans provide no coverage for mental, emotional or "nervous" cases; a small group provide coverage until diagnosis has been reached or for not more than 21 days. The remainder provide coverage for periods ranging from 21 days, up to 31 days. A few cover for as many as 70 days and three for up to 120 days. Many plans apply only in general hospitals, not in mental hospitals.

The Blue Shield plans (generally restricted to surgical and in-hospital medical service), usually cover mental illness on the same terms as all other illnesses or conditions.

Commercial insurance policies covering hospitalization, surgical expense, and medical calls almost universally provide the same coverage for mental and emotional as for other conditions. Under "major medical" or "comprehensive medical expense" policies the same is generally true although some policies provide for a lesser degree of reimbursement in mental illnesses if the patient is not disabled or hospitalized.

Most of the independent plans do not pro-

vide coverage of mental or nervous conditions after diagnosis.

Psychiatric illness should be covered by pre-payment plans on the same basis as other illness. The coverage of hospital care in general hospitals for acute mental conditions does not appear to offer difficult problems and would probably not result in major additions to present costs. The trend in prepayment coverage is decidedly toward greater comprehensiveness. If the cost of care in State mental hospitals were also included, it might eventually result in profound changes in the methods of financing this type of hospital care.

Coverage of office and home service for psychiatric illness waits, in any case, on the development of methods of providing office and home coverage of physicians' services generally. Many say that this kind of coverage is simply not feasible on a free-choice basis because of the possibilities of abuse. The problem of keeping costs within a reasonable limit seems particularly difficult with emotional illness, since—with psychotherapy at least—it is hard to specify a limited frequency of visits or a limited maximum duration of therapy.

MR. HARRY BECKER

Mr. Harry Becker called attention to the not-fully recognized fact that today there are no significant groups of persons employed in industry, and who regularly work for others, without some form of hospital-medical protection.

Emotional illnesses are costly to treat. Most patients simply cannot finance this from current earnings. If psychiatric services are to be brought within reach of the majority of the population, these services must eventually come within the scope of prepayment financing, or other sources of financing will have to be developed. Until this is done, or other sources of financing are obtained on a very broad scale, there will be substantial economic barriers to the expansion of mental hygiene services, and such services will not be available to any large segment of the population.

There is also the problem of the supply of personnel. Once sufficient funds are availa-

ble to purchase care, the expansion of training facilities will follow concurrently.

The mere inclusion in prepayment benefit standards of a specific type of benefit does not, however, mean that this benefit will be generally purchased, and that the item will thus be more adequately financed.

Collective bargaining decisions, with respect to health benefits become the real controlling factor on the relative rate at which specific items of health care will be expanded under prepayment financing. Until a given benefit provision has been adopted in a major pattern-setting labor-management negotiation it will not become a part of accepted prepayment practice as far as employee benefit programs are concerned. But once accepted in a pattern-setting labor-management negotiation, the new benefit becomes a target, for health benefit plans negotiated by all unions and all employers.

An employer cannot afford to assume a health benefit expense that will push his labor costs above that of his competitors. That is why health benefits tend to be relatively uniform throughout a given industry.

When labor and management periodically sit down to negotiate wage gains, and improvements in such working conditions as the level and scope of health benefits, part of the process is to establish priorities. If labor's share of increased productivity, and in other economic gains, is, for example, 20 cents an hour, a decision must be made on how this amount is to be allocated. Part of the gain will go to "take-home" pay or perhaps to a shorter week and more paid holidays. Improvements in pension plan benefits will, from time to time, require a portion of this economic gain because of the need for pensions to reflect both higher standards-of-living and the rising price level. And then part of labor's annual increment can be allocated to health care. The problem of more adequate financing of mental hygiene services through prepayment is, thus, one of demonstrating the need for inclusion of psychiatric services high on the priority list for improvements in employee health benefit programs. Within the next few years existing limitations on mental illness benefits for care in *general* hospitals can be expected to be eased, if not entirely eliminated.

Out-patient care, including care of emotional and mental illness, appears to be a likely priority for labor-management programs in the next few years. But it may be that priority will be given to disease detection, diagnosis and treatment of medical and surgical problems ahead of the same types of services for emotional and mental illnesses.

Not so clear, is the possibility for early inclusion of psychiatric, and psychoanalytic treatment, care in special hospitals and in physicians' offices. As standards are developed for special hospitals, and for controls against marginal use of facilities and services, restrictions on benefits for this type of care can be gradually lifted. Adequate protection against the costs of definable and disabling prolonged illness, is high on the agenda of services to which economic gains will undoubtedly be allocated.

How rapidly emotional and mental illness can be included depends on more careful definition and assurances of the most economical approach to the problem.

There must be constant assurances to the public that funds allocated to prepayment are economically spent for essential health services. Safeguards must be introduced to avoid the use of prepayment funds for loosely defined and marginal types of health services.

Care that is essentially part of a research project cannot be given a priority over the extension of coverage for such illnesses as cancer and heart disease.

Not all psychiatric, or psychoanalytic services fall into the category of marginal or luxury services, but to the extent that they do, or that the public *feels* they do, the factor must be eliminated before widespread adoption of benefits for these services can be brought into prepayment financing. These are problems to which the psychiatric, and psychoanalytic, group might direct attention to shorten the time-lag in bringing their services within the scope of prepayment.

Psychiatric and psychoanalytic services should be valuable in reducing the incidence, severity and duration of many other forms of illness. Psychiatric services, for instance, might be used in evaluating the need for surgery. This kind of benefit, would (over the long term) lower the costs of labor-management health benefit programs. This

would be true even after the inclusion of the cost of the benefits for treatment of emotional illness, providing the psychiatric services were economically provided and not undertaken when of marginal value.

Absenteeism, and the cost of income maintenance benefits during periods of illness, could be lowered by the wide-spread use of mental health services. Fewer hospital admissions, and shorter hospital stays, would appear to result from greater use of psychiatric and related mental hygiene services.

MR. JOHN R. MANNIX

In Cleveland, said Mr. Mannix, Blue Cross has, since 1939, provided for "nervous and mental cases." These benefits, however, are limited to care in private, non-governmental hospitals. There is no coverage for physicians' home or office calls. There is no provision for electroencephalograms, physical therapy or drugs, except in hospitalized cases. There is no coverage for special nursing service, visiting nursing service, or care in nursing homes. Cleveland Blue Cross and Medical Mutual could cover all of these if the public was willing to budget regularly for the cost of such additional benefits. The cost of complete hospital, medical, dental care and nursing service, at present is \$25 per month per family. Of this amount in the Cleveland area the public is budgeting \$12.40 a month on a group basis, for a comprehensive 120-day semi-private contract and a broad medical-surgical contract. The balance of the monthly cost for those services not now covered, is being charged for by hospitals, physicians, dentists and nurses, at the time service is rendered. The public will want more of the services now not covered, including services in psychiatric cases, in their pre-payment plans. The decision as to the benefits to be provided rests with the public.

Since 1939, Cleveland Blue Cross has provided relatively broad hospital benefits for "nervous and mental" cases. The demand has not been as great as psychiatrists seem to think. The Cleveland Blue Cross Plan limits its benefits for "nervous and mental" cases to 120 days at \$10 per day in private, non-government, general and psychiatric hospitals.

Bureau Ednl. Psy. Resear
DAVID HANK TRAINING COLLEGE
Dated

There has been little demand for coverage of such cases in state or federal hospitals. The larger portion of the financing of care in Ohio state mental hospitals has been met by the State. Perhaps the traditional financing of mental institutions by State government is so completely accepted that it will always be that way. It is actuarially possible for Blue Cross to include care in state hospitals. In Ohio, the annual cost of operating the State Hospital system is 55 million dollars. This amounts to \$20 a year per Ohio family. Mr. Mannix doubted whether the people really wanted to change the financing of these hospitals from the present tax-support system to support through voluntary prepayment plans.

What does psychiatric care cost a Blue Cross plan? In Cleveland, it costs about 1% of hospital claims of all types. The Cleveland plan offers up to 120 hospital days for psychiatric care. Yet the *average length of stay of a psychiatric patient is only 30 days*. Indeed, in the last decade, length of stay for these patients dropped from 37 to 24 days. Nor was there any significant difference in the average length of stay in the private psychiatric hospitals as compared with the psychiatric wards in general hospitals. It is possible that the cost of psychiatric care in general hospitals in ratio to the cost of total hospital claims, may increase in relation to general hospital care as more general hospitals establish psychiatric units or as more private psychiatric hospitals are constructed, but there has been little evidence of such a trend during the past 18 years during which Cleveland Blue Cross has been paying for such care.

The plan offered by Medical Mutual of Cleveland provides the same physicians' benefits in psychiatric cases as in other medical cases. These benefits cover physicians' services in hospitalized cases for 120 days. The fees allowed physicians are \$10 for the first day, \$5 per day for the next 20 days, and \$2 per day for the next 99 days, for a maximum allowance of \$308 during a period of hospital confinement for psychiatric care of 120 days.

MR. ALBERT V. WHITEHALL

Health insurance *can* cover psychiatric illness. This depends on the psychiatrist's

willingness to define illness and set goals for therapy. An insurance mechanism is not a creator of money. In this respect, insurance lives in an economic straight-jacket.

1. Insurance must collect enough premiums to pay its losses.

2. Insurance has no right to spend its policyholders' money for purposes other than those specified.

Insurance money is not the company's money; it is the policy-holders' money given to us for specific purposes. In health insurance, we share with the medical profession the responsibility of administering these funds in the best interests of the public—our policy-holders—your patients.

For the insurance mechanism to do its best, there are certain basic principles which must be respected.

1. *The occurrence of the loss should be infrequent.*

Insurance is a device for cushioning the infrequent catastrophe; it's not economic to use it as a method of paying current expenses.

2. *The loss must be of considerable magnitude.*

Insuring against the small expense of a single doctor's consultation is like insuring against the loss of your shoelaces. It costs almost as much to process a \$5 claim as one for \$100. Why pay the insurance company \$6 for a \$5 office call?

3. *The loss must be beyond the control of the insured.*

The treatment cannot be left to the individual. We must not waste policy-holders' money on needless things.

4. *The loss must be definite.*

To be insurable, a benefit must be a reasonably measurable and predictable entity. Otherwise, how can we set our premiums?

Suppose you are an actuary faced with the job of setting a premium for a specific type of psychiatric care. You'll have these things to do:

1. You must write a clear definition into the policy of the insured.

2. You must know the average cost of each unit of illness.

3. You must know the average frequency of each unit of illness.

4. You must write instructions for the people who pay out these benefits so they may know when the intention of the policy has been met.

All of this requires definiteness. You, as an actuary, must know what you intend to pay for. You must know what you do *not* intend to pay for. You've got to be sure that it's not possible for one case to pull the plug and drain off all your policyholders' money. Suppose you have clearly defined the benefits; you know the cost; you can predict the frequency. Then you multiply to find the total expected loss. Add a safety factor plus a small margin for administrative costs. Divide this total by the number of people to be covered and the result ought to be your premium.

This premium might be high. Maybe the subscriber would rather do without the benefit than pay that price. This gives one more component of insurability: public demand. You cannot sell a benefit that the public is not willing to pay for.

An enduring program of insurance for psychiatric illness requires that psychiatry establish patterns of care that are acceptable to the public, understood by the public, demanded by the public—and that the costs of such care be reasonably predictable. The public won't buy insurance unless it has confidence that there is a reasonable relationship between the loss and the indemnity.

The sky-rocket growth of voluntary health insurance would have been impossible without the doctor's willingness to abide by a standardized fee schedule. The legal concept of a "usual and reasonable fee" is simple recognition of the fact that the general public depends upon the medical profession to have some regularity, and some dependability in its economic patterns. Indeed, this regularity is an important factor in medicine's public relations.

A government program would insist on participating in the establishment of your patterns and standards. Voluntary insurance does not want to dictate a pattern; our job is simply to see the money our policyholders entrust to us is paid out for the purposes they have chosen. You must describe your services in terms the public may understand. You—the profession—must make your deal with the public.

In this connection, Davidson² has said:

"Perhaps we could analogize a psychiatric disorder to a surgical one. If insurance can pay a surgeon \$125 or \$175 for an hour's work in the operating room, why not pay a psychiatrist \$150 for ten hours' work at the bedside or in the interview room?"

Dr. Davidson has an excellent point.

On the other hand, I recently talked with a broker whose experience with psychiatric care has been unhappy. A subscriber in a white collar occupation was diagnosed anxiety hysteria, claustrophobia, and depression. Treatment has been continuous since 1950. This patient currently is having 20 sessions each month with a psychoanalyst at \$20 each. The case has already cost thousands of dollars. There is no present indication that this case can be closed. Do you see why this employer and his insurance broker are wondering about the insurability of psychiatric care?

The entity of "illness" will become more definite in psychiatry as medical science learns more about it. The \$175 appendectomy, which Dr. Davidson² referred to, may be less work than 10 hours of psychiatric care, but it's self-limited. There's only one appendix per person, and the procedure for its removal is reasonably standard as to care and cost. As a known entity, with public demand, we can insure it. We will be able to insure psychiatric care too with greater facility as its procedure and costs become better known and more routine.

The dramatic progress you are making makes us optimistic about the future of psychiatry as an insurable risk. Our voluntary system gives us opportunity to experiment—to test public demand constantly and to adapt ourselves quickly to new ways of doing things.

Psychiatry seems to be on the threshold of dramatic advances like those of surgery in the past generation. The public has accepted surgery, and is willing to pay the fee schedules developed by the surgeons for specific procedures. Upon this base, insurance has been most effective in giving the public access to the best of surgery through private, or voluntary, financing.

² Davidson, Henry A. "Blue Cross, Blue Shield, and the Blues" *Am. J. of Psych.* 111:931 (June 1955).

Is it any one's business to do the same. Recent discussions are urging psychiatric care into the "free market" of private practice. Insurance is eager to finance any type of service that the general public consistently demands and is willing to pay for. But it is not the function of insurance to develop patterns of care nor to control these patterns once developed. The economic future of psychiatric care is right where it belongs—in your own hands.

In discussing Mr. Whitehall's paper, Dr. Davidson said that he had heard many excuses for not covering emotional illness. Most of them are based on prejudice against mental patients. Mr. Whitehall's paper, by contrast, is restrained, well-reasoned and objective. He has tossed the problem back to the psychiatrist.

Dr. Davidson agreed that you can not expect a company to pay for an illness unless they know what we mean. Where does a schizoid personality end and a simple schizophrenia begin? Can we mark the frontier between the inadequate behavior of the anxiety-ridden neurotic and the bumbblings of the inadequate personality? We *must* do this if we want insurance coverage. They will cover psychoneurosis because it is illness. They will not cover personality or character disorders. Organized psychiatry ought to draft a workable set of definitions.

You cannot pay for a risk entirely within the control of the insured. The neurotic might feel worn out and washed up and ask for a long, restful week in a hospital bed. How can we show that this is not laziness but illness? The neurotic's unconscious motive might be a homosexual drive, infantilism or hostility. Insurance companies will not pay for disability due to those drives. We will never brand a man as lazy or spiteful because these are value judgments and psy-

chiatrists are above subjective moralizing. But the public will mutiny if its premium money is used to pay for a rest cure for a lush with hangover. No matter how we insist that alcoholism is sickness, the public will still balk. If insurance companies write policies that will cover this kind of disability, their own policy-holders will disown them.

Either we psychiatrists do this job, or the Government will freeze the definitions into statutes or regulations—or insurance companies just won't cover our patients. Someone has to write the definition of disability, and list the criteria of psychoneurosis, and stake out the frontiers of psychopathy.

Another booby trap is the criterion of recovery. When a man has recovered from pneumonia, he is cured of that. But will anyone ever gain perfect mental health? Of course not. How then do we know when a patient has recovered from emotional illness? We can do a psychiatric examination, but after all, there is no such thing as a negative psychiatric examination. Every such examination must result in *some* findings.

We are not the only doctors with this problem. Arthritis and hypertension, allergies and diabetes are in the same class. We don't get cures in the sense of a radiantly normal set of findings. But we can ask that the insurance companies treat emotional illness the same way they treat all chronic illness—arthritis, for instance. They usually have a cut-off date and stop paying after that date. Not many companies will write a non-cancellable, payment-for-life policy today that will cover disease, as distinct from injury. And we can't ask for benefits which would be denied the sufferer from allergies or arthritis.

If Mr. Whitehall is a spokesman for the insurance industry, we must say that they have made a fair proposition. The next move is not the company's. It is ours.

A POINT OF VIEW AS TO THE NATURE OF SCHIZOPHRENIA¹

NATHAN S. KLINE, M.D.²

CRITIQUE

Traditional approaches to understanding the nature of schizophrenia have served us well; they have brought us to the point where a new approach is both possible and desirable. Previous studies, despite their admitted value, have usually made one or more questionable assumptions in respect to either theory or operation.

1. Schizophrenia, it has been assumed, is either a single disease entity or a group of diseases (*e.g.*, like the organic brain diseases). In the former case, patients are classified in accordance with a single principle (*e.g.*, specific clinical, biochemical, or autonomic responses) into groups each of which is labeled as a distinct "type" of schizophrenia. In the latter case, members of such different groups are regarded as having different diseases. When comparison is made between the groupings of patients resulting from classification by these different "single principles," such groups are not even roughly similar. Whether schizophrenia is a single disease with multiple facets or a multiplicity of diseases is an experimental question which requires careful investigation. In any case it cannot be decided *a priori*, and a method must be found to develop categories which can concomitantly utilize data from the area of many of these obviously valuable "single principles."

2. Many studies have tended to be fragmentary, investigating only isolated segments

of a total field and in addition are frequently carried out during a single cross-section of time. Possible periodicity and rhythmicity of patients' reactions are lost because they are not followed longitudinally for any extended period.

3. A third assumption is that the finding of a correlation between reactions in 2 different areas of investigation of itself constitutes an explanation. The finding of a linear relationship between, say, Rorschach form (F) responses and the incidence of a particular metabolite of tryptophane may be suggestive and an invitation to further investigation but does not constitute a satisfying answer. Its real value depends upon the availability of plausible mechanisms to account for it. The general disinterest in the psychological symptoms of general paresis, such as the delusions of grandeur, etc., which followed the finding that there were spirochetes in the spinal fluid and that periarterial cuffing occurred, is actually unwarranted. Such a relationship is not comprehensible except by reference to explanatory principles from which this relationship as well as others might be derived.

4. It has sometimes been assumed that the dynamics of a single area can of itself provide an adequate basis for understanding the nature of schizophrenia. Neither Lewinian nor Freudian nor Pavlovian psychodynamics alone, nor for that matter, neurological, physiological, or biochemical dynamics can offer full understanding of the nature of schizophrenic behavior. The studies done to date, no matter how fragmentary, have shown aberrations in a wide variety of areas and any explanatory system which cannot and does not take all of these into account is for this reason a deficient one. Occasional attempts have been made to interrelate two areas (*e.g.*, the neurological and the psychological or the endocrine and the cultural) but even these must omit a large variety of "facts" which are of undeniable importance. For full explanatory power, a system must

¹ Presented at the 2nd Divisional Meeting of The American Psychiatric Association, Montreal, Canada, sponsored jointly with the Psychoanalytic Associations of Canada and North Eastern United States. This essay is based on the discussions of a group composed of Nathan S. Kline, M. A., M. D.; Albert F. Ax, Ph. D.; John H. Blair, M. A.; Louis P. Carini, Ph. D.; Manfred E. Clynes, M. S., B. Eng. S.; Leonard C. Feldstein, M. D., Ph. D.; John C. Saunders, M. D.; Ashton M. Tenney, M. A. M. S.; and Harry Walker, M. S. The formulation was that of the author alone who assumes responsibility for all the controversial and dubious points and shares credit for all the others.

² Research Facility, Rockland State Hospital, Orangeburg, New York.

be devised which is capable of utilizing data from all of the relevant areas.

5. Sometimes even single systems (*e.g.*, cardiovascular, autonomic) of an individual are studied in isolation without reference to other systems in the same area. By thus ignoring the interdependencies of such systems, the fact that two of them may share identical although differently designated elements is apt to be overlooked. Correlations are then sometimes established between 2 *apparently* different elements which are in reality disguised identities. Further, correlations between 2 such systems may actually be based on the relationship of each to a third system so that unless relevant areas are covered the *appearance* of direct interrelationship may be produced. This is then frequently complicated by a *post hoc* theory devised to cover such a correlation. Such theories usually have low or no predictive value, fail to cover other known data, and require many years to be disproved and banished from our thinking.

6. Finally, in each discipline or science certain presuppositions are made which are rarely stated either because the investigators are unaware that they are making them or else they seem so self-evident that "everyone" knows them. Often the presuppositions of different approaches are radically different and conflicts and disagreements must inevitably result. The conceptual framework, the symbols to be manipulated, the ground rules for such manipulation, and the types of conclusions sought for, may differ so radically that there can be no meaningful communication. We are proposing a more comprehensive approach which, we hope, avoids most of the limitations just mentioned.

PROPOSED APPROACH

The organization of the individual is the focus of our study. By emphasizing "organization" we mean to concentrate our study on the dynamic interrelationships among the various systems of the individual. A system is a group of structures organized with respect to particular functions. Systems may be interrelated by reason of primary "direct" interaction between them, by secondary "indirect" interaction and by the sharing of common structures.

Before interrelationships among systems of the individual can be described accurately, the functional boundaries of the various systems must be identified. To define system boundaries adequately, comprehensive data from the conventional fields of observation of the individual—morphological, biochemical, physiological, psychological and sociological—must be classified and coordinated. A meaningful classification of such heterogeneous data requires them to be cast into a common conceptual framework.

A framework sufficiently generalized to encompass the data and at the same time specific enough for quantification, we believe, can be built from constructs which we call "first order parameters." Examples are such familiar characteristics as *threshold*, *latency*, *intensity*, *rate of change*, *duration* and other *time variables*. Although all subsystems of the individual may not immediately be quantifiable by all of these first order parameters, a substantial start can be made. Careful analysis of the intercorrelations, that is, the functional dependencies among these parameters will define the boundaries of the various systems. We will naturally start looking for functional systems involving well-known anatomical structures but will attempt to avoid those classifications based largely on the peculiarities of instrumentation. If, however, the analysis diverges from traditional cleavage, we will not hesitate to designate functional units regardless of anatomical structure. For example, a functional subsystem may be composed of certain glands, parts of the autonomic nervous system and particular areas of the brain.

The next step will be to regroup the data so as to obtain purified measures of the subsystems which we expect can be recast into the same kind of constructs (*threshold*, *latency*, *intensity*, etc.). These system parameters together with their empirical interrelationships constitute the common conceptual framework by which we hope to describe the dynamic organization of the individual. This approach should facilitate communication between investigators in specialized disciplines, suggest experiments, clarifying system interrelationships and permit the construction of a theory sufficiently general to comprehend

the complexity of the phenomena under study.

It is our opinion that the method we propose for conceptualizing schizophrenia is not only *not* in conflict with clinical experience, but will serve to clarify many concepts derived from clinical observations which are presently quite vague.

It is a platitude that schizophrenics are "disorganized." This can only mean that they are organized differently from the average or normal. Describing the organization *per se* would concretize this concept of "disorganization." Patients are also said to be "unstable" or "labile." Description in terms of the parameters we have proposed could demonstrate the generality of "lability" among the various systems. *Lability* would be a second order construct obtained by finding a pattern among the first order constructs (threshold, latency, etc.). *Rigidity* is another term which could be more precisely defined in this framework and might well be found to have wider meaning and application than is now the case. Catalepsy, flattened affect, hallucinations and other characteristics of schizophrenics are translatable, in whole or in part, into the first order constructs or can be constituted from these "primitive" parameters into second or third order constructs which would then have precise, confirmable, empirical correlates.

The interrelationships between the various disciplines presently under investigation are still in too preliminary a form to warrant publication in print. The analysis of such data obviously requires the use of special techniques and of high speed data reduction and the development of dynamic systems analysis through the use of analog computing techniques will be described in forthcoming publications.

SPECULATIONS

An initial hypothesis would be that the organization of schizophrenic individuals is such that the various systems and sub-systems are able to function together "effectively" only under special circumstances. By "effectively" is meant the ability to simultaneously achieve social, emotional, intellectual and motor objectives. Any dislocation,

whether internally or externally (environmentally) precipitated, is not compensated for in the "normal" manner which maintains the same basic interrelationship between the various systems. Instead there is a re-organization in which equilibrium is reached by the splitting off of one or more systems which then respond with relative autonomy (accounting for the great variability of response) while the remaining systems tend to be integrated with great rigidity. The effort to maintain this stability and to compensate for the "missing" systems produces many of the observed symptoms. The goal-directedness continues but due to the incompleteness of the organism and the loss of both reality achieving and reality testing elements the performance is inadequate by objective standards.

Even the split off systems do not behave purposelessly but now become subject to stimulus generalization, responding in an "adequate" way but to inappropriate stimuli. It is thus not the malfunctioning of this or that system that is the basic defect in schizophrenia but the failure of such systems to be integrated into the overall activity of the organism. Therapy consists of again creating those circumstances under which the various systems can function together adequately and may be achieved by alteration of either internal or external factors or both. Not infrequently in the early stages there is spontaneous re-alignment of the systems. This may consist of a new disequilibrium so that the organism lurches forward to a new rigidity by the splitting off of additional systems. In other cases the realignment is commensurate with successful performance so that "spontaneous remission" is still the most frequent type of recovery. The more extensive and prolonged is the incomplete but rigid organization, the more likely that internal (*i.e.*, chemical) alterations will be required to return the organism to a fully functional state. External factors can augment or impede such changes.

Although the awareness of a discrepancy between the possibility of goal-achievement (ego ideal, body image, etc.) and goal-capabilities may precipitate a schizophrenic episode, it is not a basic disorder as may be the case in the neurotic. Such a discrepancy can

...or, finally, by a less radical substitution of one solution for another. It is obvious that the schizophrenic may or may not be faced with this problem and utilize these solutions so that a neurosis may co-exist with a psychosis at any stage of either disease although they continue to be basically different.

The speculations proffered in the last few paragraphs have not been in the strictly "organizational" framework originally proposed but are amenable to such statement once the basic systems have been delimited.

SUMMARY

1. Traditional approaches to the problem of schizophrenia have made various theoretical and operational assumptions, six of which are reviewed and criticized.

2. An approach is proposed which offers certain advantages such as empirical verifiability.

3. Speculation as to the nature of schizophrenia is given within this general framework.

ANALYSIS OF 1955-1956 POPULATION FALL IN NEW YORK STATE MENTAL HOSPITALS IN FIRST YEAR OF LARGE-SCALE USE OF TRANQUILIZING DRUGS¹

HENRY BRILL, M.D., AND ROBERT E. PATTON²

POPULATION PROBLEM IN THE NEW YORK STATE MENTAL HOSPITALS AND INTRODUCTION OF CHLORPROMAZINE AND RESERPINE

On March 31, 1954 the census of the New York State mental hospitals was 90,893, over double the number of 25 years before and 4 times the 1900 figure. The steady increase had not been visibly influenced by 20 years of other somatic therapies and when chlorpromazine and reserpine appeared on the scene in late 1953 and early 1954 it seemed unlikely that these could offer any more in this direction. However, early results were too encouraging to be ignored and by the end of 1954 an expanding series of pilot projects throughout the Department of Mental Hygiene had clearly confirmed the therapeutic activity and clinical usefulness of these drugs. In January 1955 chlorpromazine and reserpine were made available for general use in the state hospitals and schools and large-scale application was begun.

POSSIBILITY OF EFFECT ON POPULATION OF MENTAL HOSPITALS: PROBLEMS OF EVALUATION

One of the first and most insistent questions which had to be faced was the deceptively simple one whether this new method would at last halt or reverse the long record of population rise in the mental hospitals of the state. Any answer to this question, if made in advance of actual trial, involved at least 3 assumptions, all of them open to serious doubt:

1. *If effective, the new therapy would necessarily cut the need for hospital beds.* The tuberculosis and contagious disease hospitals and epileptic colonies were often quoted

as examples where therapy had reduced bed needs. Their validity was doubtful because these institutions serve well-defined and fixed groups of patients while the mental hospitals receive a broad and ever-changing variety of cases. As a result, the latter are more comparable in function to general hospitals whose increase of bed capacity has equalled that of the mental hospitals during the last 25 years in spite of the epoch-making therapeutic gains of the period. Here, at least, advance in treatment has not led to reduction of patient population.

2. *That the effect of a new therapy on bed needs would become evident in a comparatively short time.* Psychiatric hospital experience has been to the contrary. Even the most outstanding achievements have produced only a slow decline of census. It was almost 10 years after the introduction of dilantin that the epileptic colony in New York State began to show a clear-cut reduction. In spite of brilliant advances in anti-luetic therapy, the number of paretics in its state hospitals continued to increase until 1945 when it reached 3,578, and had fallen only to 3,034 by 1956. The benefits of new procedures may very well be expressed primarily in terms other than those of need for hospital beds. The reduction of mortality rates may balance the effect of an increase of releases for years. This is especially true in illnesses where chronic disability is a factor.

3. *That if a fall of population or any other general statistical change took place after introduction of chemotherapy, it would be a relatively simple matter to establish a cause and effect relationship.* This assumption overlooks the formidable difficulties that stand in the way of disentangling the effect of any one factor from the complex of known and unknown influences which control movement of mental hospital population. *Post hoc* reasoning is particularly difficult to avoid in this type of interpretation.

¹ Read at the 113th annual meeting of The American Psychiatric Association, Chicago, Ill., May 13-17, 1957.

² The authors wish to make grateful acknowledgment of a grant for this study from the Albert and Mary Lasker Foundation.

³ Dept. of Mental Hygiene, State Office Bldg., Albany, N. Y.

In spite of these and other reservations, it was obvious that the tranquilizers were capable of being applied on a scale never before approached in psychiatric therapy. This might be an important aid in evaluation, especially if a large number of patients could be reached during the first year or two. Under such conditions useful large-scale historical comparisons might be made, something which had never really been achieved for other somatic therapies because of the slow growth in their volume of use. The rapidity of extension of drug therapy proved to be entirely satisfactory from this point of view. In the first fiscal year of full-scale use this treatment was given to over 30,000 patients, or 27.8% of all possible cases. Since the amount given in the previous year (1954-55) was quite small, it was possible to use the latter as a sort of control period for comparison with 1955-56 which thus approximated a test period. We hoped data derived from this comparison might lend perspective to the studies of controlled series of cases, double-blind studies, cohort studies and basic researches which were being carried out in various research centers of the department.

LARGE-SCALE APPLICATION: EFFECT ON RESTRAINT AND SECLUSION PROMPT

The first effect of the new therapy in the state hospitals was a spectacular reduction of disturbed behavior and this remains as one of its most outstanding contributions. As the use of tranquilizing drugs increased, restraint and seclusion decreased (Figure 1). By the end of a year these figures had been cut almost in half and at the end of the second year they had been again reduced by a half.

In the state schools, response was less spectacular but still very good. Restraint-seclusion figures fell from 16.8 to 6.7 in the two-year span. This confirms the clinical observation that the tranquilizers are useful in cases of mental deficiency, but less regularly than in the mentally ill. Any attempt to explain these results on dynamic factors alone must include the fact that the response is generally better in severe defectives where contact is poorest and less satisfactory in the behavior disorders of higher grade cases. Similarly, among children in state hospital units psychotic excitements respond far better than do primary behavior disorders.

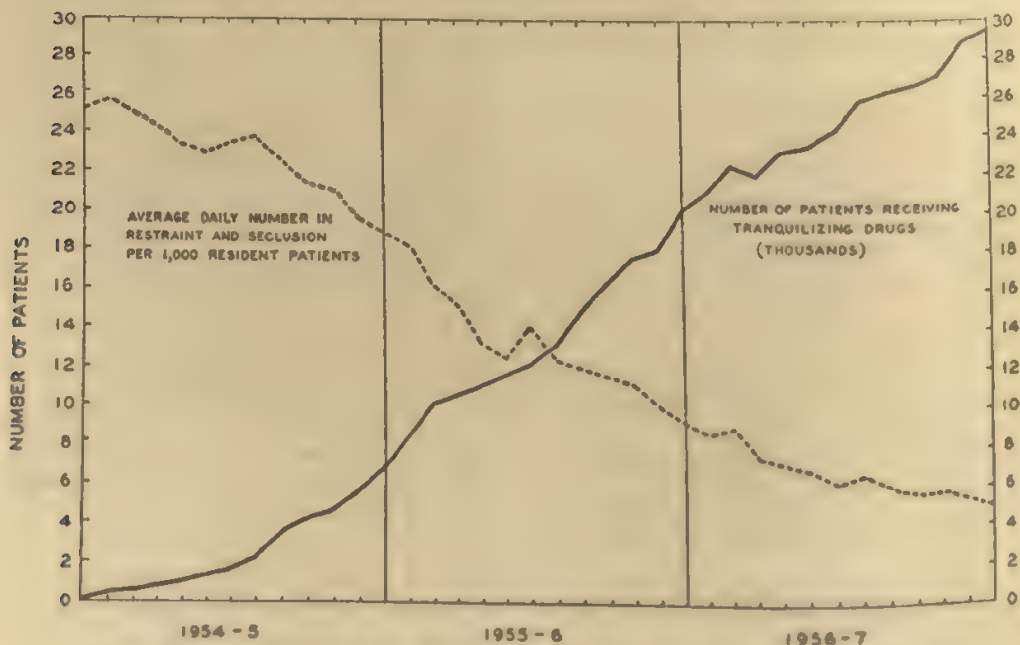


FIG. 1.—Somatic therapy and restraint-seclusion. New York Civil State Hospitals.

POPULATION FALL 1955-56

By mid-summer of 1955 it had become apparent that a change in population equilibrium was taking place in the mental hospitals. This became more pronounced in the succeeding months and on March 31, 1956 the census showed a reduction of some 500 over the year instead of the expected increase of 2,000-2,500. The same trend continued in the second year which ended with a further decrease of almost 500 (Figure 2).

Not long after our figures had begun to show a clear downward trend we heard that other states were recording similar changes. This group now includes a large majority of the states. The mental hospital population of the United States fell by over 7,000 patients during the fiscal year 1956,⁴ and recently there have also been reports of a reduction in the British mental hospitals. Thus, our experience is not unique but appears to

⁴ Public Health Reports, 72: No. 1, P. 14, Jan. 1957.

represent a broad trend which deserves careful examination and analysis of all available data.

THE METHOD AND ITS ASSUMPTIONS

This paper will present the results of an analysis of New York State figures with attention centered on the fall in population and the way in which it is distributed among the various categories of patients. It will be compared with New York State's only previous significant reduction in mental hospital population, which took place during World War II, and will be examined in the light of some long-term trends. Our method involves the assumption that the way in which the fall is distributed among the various categories of patients may offer a clue as to the factor or factors which caused it. If it is due to somatic therapy of functional disorder, it should have a more specific distribution than if due to social, economic or other influences which should affect all classes

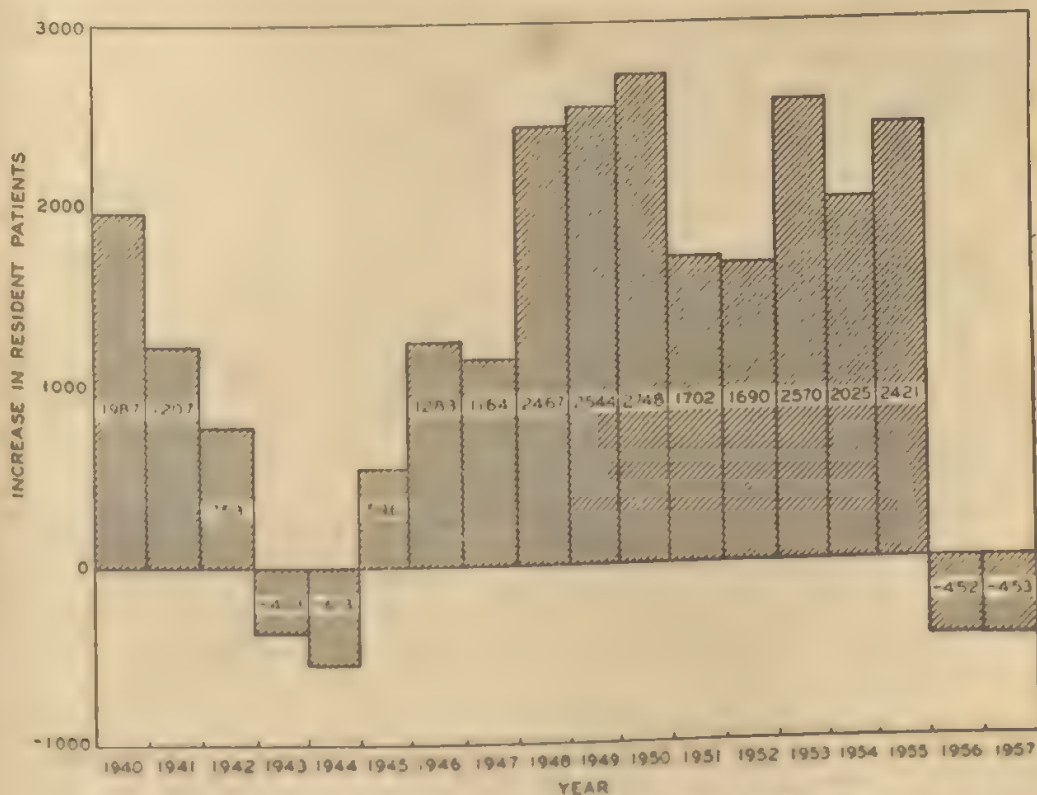


FIG. 2—Annual increase in resident patients, New York Civil State Hospitals.

uniformly and should also. The paper is not a summary of the results in two groups of one of which had drug treatment and the other did not. Instead it compares and contrasts the total results of two successive years of work in a mental hospital system.

The great identifiable difference between the two years is that in the second year some 30,000 patients received drug therapy. We know of no other major change in operating conditions which took place between 1954-55 and 1955-56. A series of intensive treatment programs with special budgetary provision were undertaken after the close of the fiscal year 1955-56 and are now operating but they did not influence the two years under examination.

STATISTICAL COMPARISON OF FIRST YEAR OF LARGE-SCALE DRUG THERAPY WITH PREVIOUS YEAR

When the data for 1955-56 were compared with 1954-55,^a the following significant points emerged:

1. There was no outstanding increase in either personnel time or per capita expenditure, although 1955-56 had a normal cost increase in line with a long-term trend.

	Per capita cost	Ward personnel hours available per patient
1953-54	\$1,123	312
1954-55	1,206	321
1955-56	1,293	331

2. The number of patients completing a course of somatic therapy during the year increased from 16,863 to 40,301. This increase of 250% was due entirely to the new drug therapy and it appears large enough to

^a Additional tables are available on request from the authors.

produce a material effect on releases if the treatment is therapeutically active.

3. The census rise of 2,421 patients in 1954-55 was replaced by a reduction of 452 in 1955-56, a change of 2,873. This difference was due primarily to an increase of 2,793 in the number of patients released (Table 2). Age specific death rates declined slightly but the total number of deaths was higher. This is in line with a long-term trend due to aging of the population.

4. Total admissions remained unchanged but there was a slight increase in the number of geriatric cases and a small decrease in the number of schizophrenics.

5. There was some improvement in releases of all diagnostic groups except senile psychoses. Those categories of patient who might be expected to benefit most from drug therapy showed the most marked increase of releases (Table 2) and the most marked drop in residual population at the end of the year (Figure 4). There was a decrease of 683 schizophrenics during the year and a reduction of 169 manic-depressives while there was an increase of 433 in psychoses of the senium and an increase of 46 in the alcoholic group.

6. Results according to duration of hospitalization are shown in Figure 3 where the greatest relative advantage appears in the group admitted 2 to 4 years previously. Our data show that some 30% of patients with 3 years' hospital residence were treated with drugs and the outlook for release from this group improved by 52%. One cannot invoke the explanation that favorable long-term cases were chosen for treatment because these figures include all releases from the entire population of this class. The relative improvement in the test year was much less among newly admitted cases where any change of administrative policy might be expected to have its greatest impact.

TABLE 1

MOVEMENT OF RESIDENT PATIENTS IN NEW YORK CIVIL STATE HOSPITALS, FISCAL YEARS ENDING MARCH 31, 1955 AND 1956

Year	Resident patients start of period	Admissions	Deaths	All releases alive	All returns	Resident patients end of period
1955	90,893	21,459	8,078	16,069	5,109	93,314
1956	93,314	21,454	8,345	18,862	5,301	92,862
Change	+ 2,421	- 5	+ 267	+ 2,793	+ 192	- 452

TABLE 2

PATIENTS RELEASED ALIVE* DURING 1954-5 AND 1955-6 FISCAL YEARS WITH NUMBER OF THESE PATIENTS WHO HAD RECEIVED DRUG TREATMENT IN 1955-6 BY MAJOR DIAGNOSIS GROUPS

		Diagnosis							
Released alive	Total	General paresis	Alcoholic psychoses	Psychoses with cerebral arteriosclerosis	Senile psychoses	Involuntional psychoses	Manic-depressive psychoses	Depressive psychoses	All other
1955	14,362	110	1,456	710	260	1,431	1,069	6,426	2,000
1956	17,058	114	1,562	802	233	1,688	1,176	7,865	3,118
Per Cent Increase...	18.8	3.6	7.3	13.0	-10.4	18.0	10.0	22.4	24.8
1956 Treated	5,222	16	271	218	61	603	500	2,670	883
Per Cent Treated...	30.6	14.0	17.3	27.2	26.2	35.7	42.5	33.0	21.4

* Does not include patients placed on family care or escapes.

7. The use of drugs was concentrated primarily in certain groups of functional psychoses, especially among women and among the newly admitted cases. Some tranquilizing drug therapy was, however, in use among virtually all categories and the variations in percentage were often not as marked as might have been expected. Of the patients

available for treatment, 27.9% received drug therapy, with males showing a figure of 20.9 and females 33.9. The proportion ranged from 9% in male cases of CNS lesions to 43% in female manic-depressives and 46% in female psychoneurotics.

8. No quantitative correlation could be shown between the percentage of patients re-

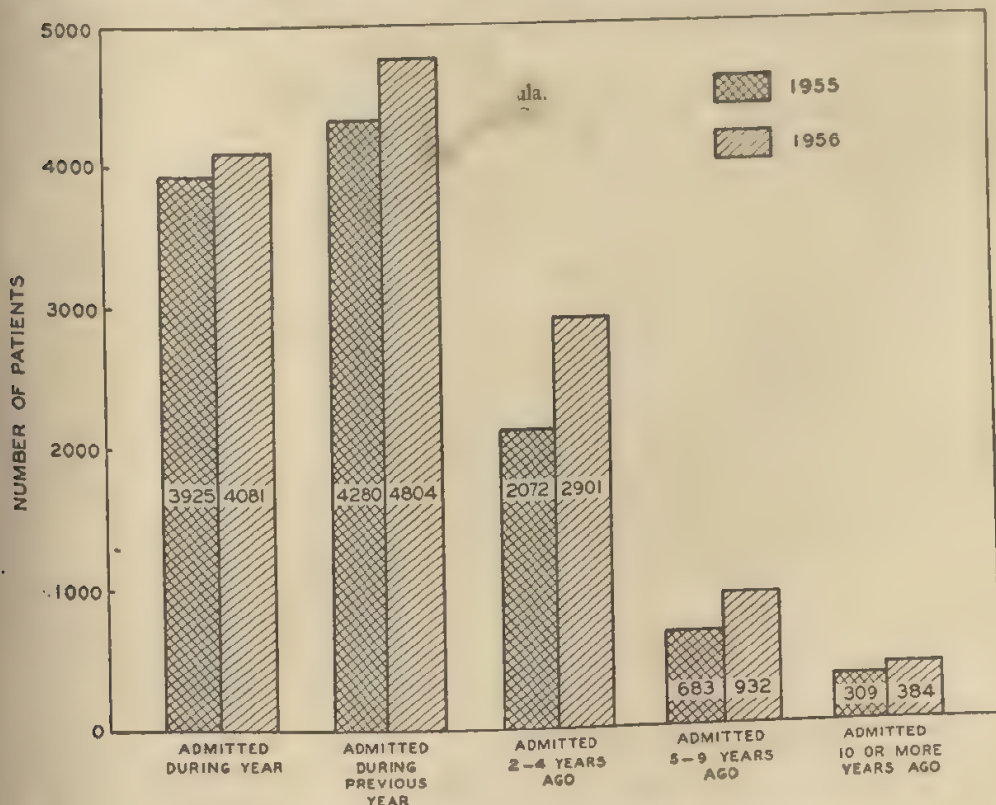


FIG. 3.—Patients placed on convalescent care by time since admission. New York Civil State Hospitals.

TABLE 3
PATIENTS RELEASED ALIVE * DURING 1954-5 AND 1955-6 FISCAL YEARS WITH NUMBER OF THESE PATIENTS WHO HAD RECEIVED DRUG TREATMENT IN 1955-6 BY TIME SINCE ADMISSION

Released alive	Total	Time since admission									20 years and over
		Less than 3 mos.	3-5 mos.	6-11 mos.	1 year	2 years	3 years	4 years	5-9 years	10-19 years	
1955	14,362	310	1,224	4,478	5,018	1,318	584	360	746	254	70
1956	17,058	396	1,511	4,865	5,702	1,759	885	530	996	340	74
Per Cent Increase..	18.8	27.7	23.4	8.6	13.6	33.5	51.5	47.2	33.5	33.9	5.7
1956 Treated	5,222	164	718	2,100	1,251	384	235	120	197	46	7
Per Cent Treated..	30.6	41.4	47.5	43.2	21.9	21.8	26.6	22.6	19.8	13.5	9.5

* Does not include patients placed on family care or escapes.

ceiving drug therapy in a given hospital or in a given category and the amount of improvement in releases. This may, and probably does, reflect a differential responsiveness to drugs in various categories of patient and also may reflect the differences in use of drug therapy in various hospitals. Since all hospitals used large amounts of drug therapy, such differences should not be overemphasized. The correlation of volume of drug therapy with reduction in restraint and seclusion was much closer than with releases.

9. Improvements in releases have continued throughout 1956-57 at about the same level, although we have not yet been able to analyze this data in detail.

10. A word as to the stability of the response to drug therapy is warranted. Because of the state's policy of free admissions with no waiting lists, the number of returns from convalescent leave expresses clearly the tolerance of the community toward mental symptoms. One would expect that attempts to force releases would be accompanied by an increased number of returns. This did not happen. In the first year of large-scale drug treatment the proportion of returns actually fell somewhat. In the second, it rose again slightly but did not reach the previous level.

COMPARISON WITH 1942-43 PERIOD

Has there been some world-wide, or at least nation-wide, change other than drug therapy which might account for these facts, some shift in the equilibrium of forces that control the size of mental hospital population? Such a change did occur in World

War II and brought about widespread reductions of mental hospital population.

A statistical comparison of the two periods in the New York State hospitals reveals the following significant differences (Figure 4).

1. Admissions fell sharply in World War II from 17,611 cases in 1941-42 to 16,489 for 1942-43 (corrected to 12 months). Admissions remained high in 1955-56 (Table 1).

2. In both periods there was a rise of the number on leave from the hospital at the end of the fiscal year (from 7,501 to 8,677 in 1942-43 and from 9,928 to 12,019 in 1955-56). The recent rise was much larger.

3. The wartime drop was of gradual development which reached a maximum and gradually receded. In contrast, the present fall was abrupt and without warning (Figure 2).

4. The state schools lost population during two of three wartime years. They continued to gain in 1955-56, although at about half the usual rate.

5. The wartime shift affected both functional and organic cases (Figure 4) and especially psychoses of the senium. It followed a nonspecific distribution. The 1955-56 change was much more selective. It involved functional cases strongly and organic cases much less. It was not limited, however, to categories where drug therapy could have been expected to exert a strong influence and the increase in geriatric and alcoholic cases was less than expected in the state hospitals (Figure 4).

These lead to two inferences: (1) the population fall of 1955-56 was due to the coexistence of two favorable factors, a stronger specific one due to drug therapy

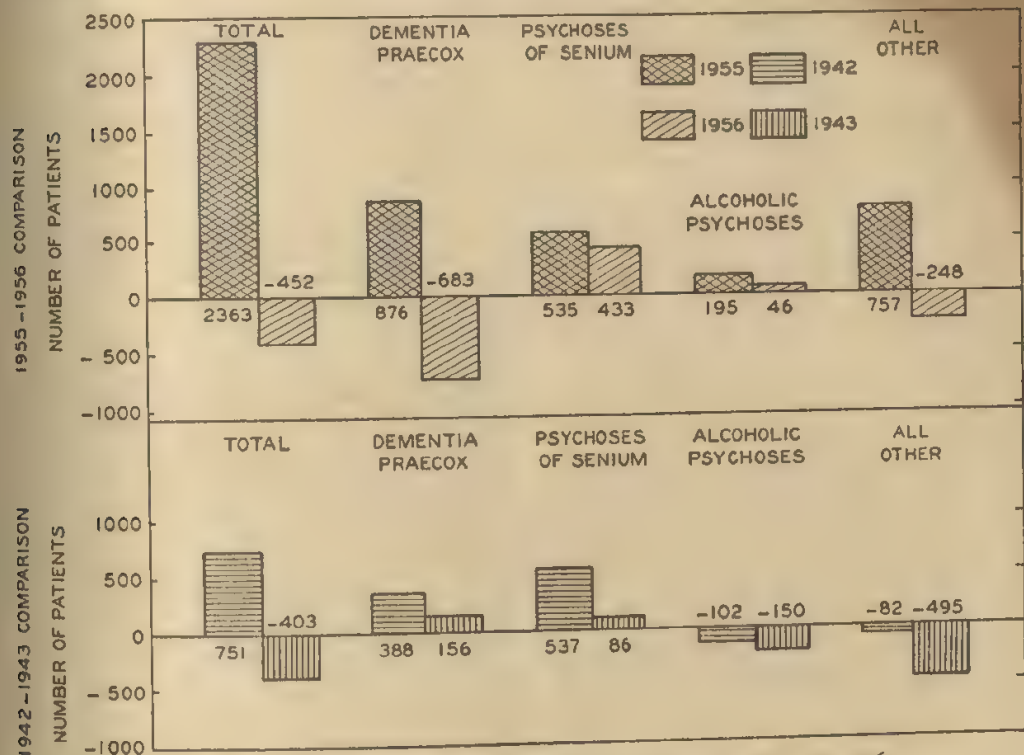


FIG. 4.—Comparison of change in population in 1942-1943 with 1955-1956.
New York Civil State Hospitals.

and a less marked, nonspecific one, perhaps of socio-economic nature which was similar in distribution but less in extent than that of World War II; (2) if this non-specific factor should be reversed it might obliterate much of the gain due to drugs. The importance of this fact for practical planning is obvious.

SUMMARY AND CONCLUSIONS

In the year 1955-56 the number of patients reached by somatic therapy in the mental hospitals of New York State was increased by some 250% due to the introduction of the tranquilizing drugs, chlorpromazine and reserpine. At the end of that year the residual population of the state hospitals showed a fall of some 500 patients in comparison with the increase of 2,500 of the year before and the average rise of 2,000 per year for the previous decade. More recently, figures have become available, indicating that similar changes have occurred very widely elsewhere. In New York the same trend

continued during 1956-57, producing a further reduction of some 500. Going on the assumption that the cause of the fall of population might be reflected to some degree in the distribution of the sudden population change, we carried out an analysis which compared the over-all data for 1955-56 with that for the previous year. No difference in hospital procedure or method was identified except the addition of drug therapy on a large scale in 1955-56.

In addition to comparing 1954-55 with 1955-56, we also compared the recent population fall with that which occurred during World War II.

From this work the following conclusions are drawn:

1. A major identifiable influence in the present trend toward stabilization of New York State mental hospital population is the large-scale use of tranquilizing drugs, of which chlorpromazine now constitutes about 75%.

2. In addition, there appears to be a

weaker influence of nonspecific distribution operating in the state school population and in categories of mental hospital patients where the drugs have only a restricted and symptomatic indication. These categories are still continuing their long-term increase but the rate of growth has diminished.

3. The 1955-56 improvement was distributed as might be expected from clinical experience with drugs. It was relatively greater among functional cases and cases of longer hospital stay, especially schizophrenics.

4. The present fall of state hospital population in New York differs basically from the 1942-43 reduction in: (1) the suddenness of its development, (2) the fact that hospital admissions remained high, (3) its involving primarily a fall in the residual schizophrenic population while the war-time change involved all categories in a diffuse fashion.

5. In spite of a marked increase in releases following large-scale drug therapy, the rate of return was slightly less than before.

6. One of the most outstanding values of the use of tranquilizing drugs in mental institutions is reflected in the data on restraint and seclusion. In two years' time these figures were reduced by 75%. This is only a mathematical expression of what has been a revolution in the care and treatment of mental patients.

7. Our figures do not support the thesis that we are at a point where we can expect a large-scale reduction of need for mental hospital beds. There is reason to believe that a downward change in the economic level might very well have such a large negative effect as to produce again an increase of hospital population unless even more effective treatment methods are developed.

DISCUSSION

SIDNEY B. EISEN, M.D. (Chicago, Ill.).—Dr. Brill ascribes the reversal of the long term trend towards increasing number of patients in the state hospital system to the use of chlorpromazine and reserpine. The methodological technique used to prove his assumption is that of the "historical control" which is certainly a valuable method of study in psychiatry. Analogous methodology has been used in clinical psychiatric studies of psychotherapy where the variable leading to change is an interpretation, the patient's reactions before and after the interpretation

then being compared. Individual hospitals have also been studied in this same manner. Greenblatt at Boston Psychopathic Hospital compared the functioning of the hospital before and after the introduction of an active milieu therapy program. Hamburg and Sabshin carried out the same kind of study at Michael Reese Hospital also using the amount of seclusion, sedation, and restraint as indices of hospital change after the alteration of the hospital's milieu. Today's report shows a very valid extension of this principle to the study of a *whole hospital system*. The authors compare the population patterns before and after the initiation of large-scale tranquilizer use and relate these changes to the possible effects of the drugs.

However, there are certain *limitations* to the method of historical control whatever its focus, be it the individual, the hospital, or the entire hospital system. The most important limitation has traditionally involved the omission of unexpected and unlooked for variables which only later, if at all, are deemed to play a significant part in the change. The authors make the statement, "We know of no other major change in operating conditions which took place in 1955-56." However, the bias of the investigator may be such as to minimize the presence of other less pronounced variables because of his specific area of interest, or he may oversimplify because of the multitude of variables under study. We believe that in such a sweeping study as this there are many uncontrolled variables.

A second important problem in the historical control method is that of the time required for evaluation of the variable producing the change. Any effort to study hospital population variation must use a time span in terms of years if the long term nature of fluctuations and patterns are to be understood. The authors are to be congratulated for the manner in which they made use of a previous fall in hospital census during World War II in order to assess long term population patterns. This comparing and contrasting of the present change with that seen in World War II helps bring to light the specificity of this change. But more of a time span is needed before the current change can be fruitfully compared with previous fluctuations. Is this present change of population similar to that seen in World War II in being a temporary shift of equilibrium of the hospital system, or is it the beginning of a long-range trend? This is a question that only the future can answer. Dr. Brill implies that the effects will be more long term than in World War II since the population fall *predominate* affects the schizophrenic group, and, it is implied, the treatment is a specific one.

The authors add, however, that the change was not limited exclusively to categories where drug treatment could have been expected to exert a strong influence, and they are led by this to the supposition of a second, concomittant, *less marked*, non-specific factor. They suggest this factor to be similar to a "socio-economic" factor involved in the patient population fall during World War II. Unfortunately this socio-economic factor is left undefined by the authors and is hard to discuss as such.

I would like to propose some other factors which might have been operative in 1955-56 and played a role in the shifting pattern. Some of these factors have developed slowly over previous years—others are merely glimpses of the future. For example, in recent years there has been a growing optimism in the treatment of schizophrenic patients with psychotherapy and sociotherapy. Has this optimism taken hold in the New York State Hospital system as such, or has it been catalyzed by the tranquilizer drugs?

Also, while the per capita expenses and the number of personnel available in the New York State hospitals have remained roughly stable from 1953 through 1956, there still remains the question of changes in the *qualitative care* received by the patients during this time. This is a factor which is difficult to measure and likely to vary from hospital to hospital. Perhaps an examination of the population fall within the individual hospitals would shed further light in this direction.

The arrival of the tranquilizers on the scene was certainly a major new variable, but what about the attitudes of personnel to the new drugs? I know from experience that in some hospitals the drugs were greeted with great expectations, with the feeling, "Now at last we can finally *do* something for all those patients on our back wards." Personnel then attacked the problem previously appearing so hopeless with renewed vigor. Certainly this new, expectant attitude on the part of personnel had its effect on the patients. Even double-blind studies do not entirely limit this effect. Speaking from our own experience at Michael Reese Hospital there can be no doubt about the attitude of personnel affecting the response of patients to various forms of treatment. As Sabshin and Ramot have reported, in

our hospital the personnel received news of the tranquilizers with disfavor, feeling that here was another factor to make only more obscure the patient-doctor relationship. Results of treatment with drugs at this and other private hospitals failed to show the cure rates reported in other studies.

The issue of personnel attitude raises a number of questions. Has there been a rebirth of hope in the New York State Hospital system personnel? Can this hope be sustained? If the patient population begins to climb again, will it be due to a diminution of faith in the drugs by the ward personnel? If a large number of schizophrenic patients are readmitted in the late 1950's, will this lower staff morale? Will "socio-economic" factors be called on to explain the patient population rise, if this occurs, rather than staff attitudinal change or ineffectiveness of drugs? I realize that the methodological techniques to answer these questions are enormously complex. Nevertheless I raise them because there are dangers in *prematurely* accepting the premise that the changes noted in patient population are "drug specific." If the roles of milieu therapy and psychotherapy either alone or with drugs are underemphasized, the current population trend may be seriously reversed with widespread return of pessimism in institutional practice. I am confident that either explicitly or implicitly they will not be underemphasized and will continue to work in concert with somatherapeutic procedures.

Please note that I do not say that the drugs are not important in the changes reported in this paper; obviously they are valuable. The chief questions I raise involve limitations in the historical control method when observed over *too short a time*, and with a tendency towards unicausal explanation which masks slower moving and subtler changes.

TREATMENT OF PARKINSONISM

PRELIMINARY REPORT ON USE OF PROMETHAZINE¹ IN 12 CASES

ELIERE J. TOLAN, M.D., AND JOHN OLARIU, M.D.²

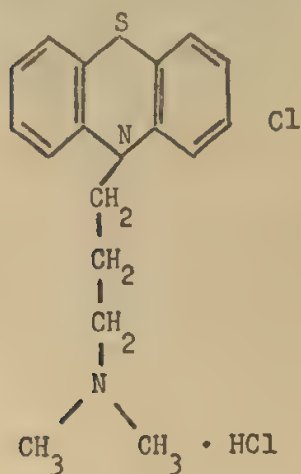
The medical and surgical measures suggested for treatment of Parkinsonian syndromes are legion(1, 2) but on the whole the results have been discouraging. All treatment heretofore used has been essentially symptomatic. None has significantly altered the course of the disease. Since 1947(1-5), various antihistamines have been added to the therapeutic regimen, administered either alone or in combination with antispasmodics and vitamins. Some compounds have shown more or less promise. A thorough and systematic screening, such as that conducted with the antimalarial drugs during World War II, would be ideal; but since there are thousands of antihistaminic agents and related substances, such a procedure would be too time-consuming, hence for all practical purposes, is impossible. In selecting a potentially active drug for clinical study in Parkinsonism, therefore, one must be guided

by reasoning based on the information currently available concerning the pharmacological effects of the compounds known to be active on the particular levels of the central nervous system involved.

Certain of the compounds derived from the phenothiazine nucleus have shown a definite action upon the extrapyramidal system, reticular activating substances and related areas. Parkinsonian symptoms not infrequently have developed during medication with chlorpromazine (fig. 1), as well as with Rauwolfia. Promethazine (fig. 2) was chosen for this investigation because 1. the compound has a definite atropine-like action, and 2. has shown ability to control the Parkinson-like syndrome resulting from medication with chlorpromazine and reserpine.

METHOD

Twelve institutionalized white patients (7 males, 5 females) were treated with promethazine by mouth. Four were 37 to 48 years old, 5 were 53 to 69, and 3 were 75 to 80. All were suffering from advanced Par-

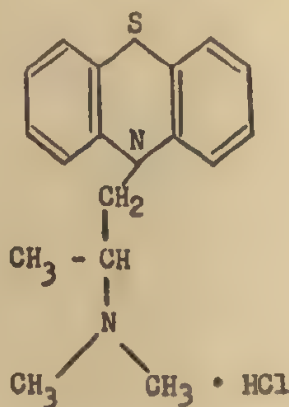


Chlorpromazine Hydrochloride

FIG. 1

¹ Phenergan® Hydrochloride Tablets, Promethazine Hydrochloride, were supplied by Wyeth Laboratories.

² Address: Hawthornden State Hospital, Macedonia, Ohio.



Promethazine Hydrochloride

N-(2'-Dimethylamino-2'-Methyl) Ethyl Phenothiazine Hydrochloride

FIG. 2

kinsonism. The etiologic types, as nearly as could be ascertained, were as follows—

Parkinsonism associated with cerebral arteriosclerosis	5
Postencephalitic Parkinsonism	2
Idiopathic Parkinsonism	5
	—
	12

Four patients (1, 4, 7 and 8) had been treated previously with mephenesin, a combination of hyoscyamine hydrobromide, atropine sulfate and scopolamine hydrobromide, trihexyphenidyl, diphenhydramine hydrochloride and reserpine, singly or in various combinations, with no benefit.

Medication with promethazine was fairly uniform for the group. High dosage was not used, since it was desired to determine whether a measure of improvement could be obtained with conservative doses, from which side effects would not be expected. All but 1 patient received 12.5 mg. two or three times a day initially (no. 4 was started on 25 mg.). The dose was then increased to 25 mg. three times a day, which was continued for 3 to 15 weeks. Duration of treatment for each patient totaled 2 to 16 weeks. Six patients are still receiving the medication.

For comparison, 37 patients suffering from various other mental disorders, including Alzheimer's disease and Huntington's chorea, were treated with promethazine in the same dosage. Medication was continued for an average of 16 weeks.

Evaluation of response.—The difficulty of accurately and scientifically appraising changes in the protean symptomatology of Parkinsonian syndromes as a result of therapy is well known to all workers in the field. We did not try to use electronic devices, as described by Agate and co-workers (6), because the patients were all mentally deficient or disturbed, so that little or no cooperation could be expected. Moreover, any emotional response evoked by the procedure would influence the apparent results. For example, some patients deliberately exaggerated their tremors and rigidity to gain more attention; others tried to control their symptoms as much as they could to please the examiner.

In this series every sign and symptom was

evaluated repeatedly, both by watching the patients while they were unaware of observation, and by direct examination while striving to distract their attention from the body parts under scrutiny.

RESULTS

Eleven of the 12 patients (91%) showed definite evidence of improvement (Table 1), which was not limited to motor activity alone, but in most cases involved speech, mood, thought content, mental ability, appearance, orientation and various other spheres in which there had been severe deterioration. The dramatic alteration in the clinical picture seen in case 1 is described in detail in Table 1. Even the visual acuity of this patient was remarkably enhanced. The same outline was used in evaluating the response of the other patients, but for these only the most clearly defined evidences of benefit are recorded.

Pronounced improvement was seen in 4 patients. Grouped as to probable etiology, the clinical types were as follows—

Arteriosclerotic—patients 1 and 2, treated for a total of 6 and 5 weeks respectively.

Postencephalitic—patient 3, treated for a total of 16 weeks.

Idiopathic—patient 4, treated for a total of 13 weeks.

Moderate improvement occurred in patient 5, whose disease was probably of arteriosclerotic origin. Treatment was continued 4 weeks.

Six patients showed slight improvement. The etiologic types were as follows—

Arteriosclerotic—patients 6 and 11, treated for 2 and 4 weeks respectively.

Postencephalitic—patient 8, treated for a total of 8 weeks.

Idiopathic—patients 7, 9 and 10, treated for 8, 4 and 2 weeks respectively.

The one failure occurred in case 12, of idiopathic type. This patient was treated for 16 weeks.

In the group treated for comparison the results were uniformly disappointing. No benefit whatsoever was obtained from medication with promethazine in any of the patients suffering from mental disturbances not associated with Parkinsonism.

No side effects developed during this study.

TABLE 1
CLINICAL RESPONSE OF PATIENTS WITH PARKINSONISM UNDER TREATMENT WITH PROMETHAZINE

Patient				Promethazine treatment			Diagnosis and previous treatment	Date started	Promethazine treatment		Status before promethazine treatment	Status after promethazine treatment	Evaluation of results	Side effects
No.	Init	Age yrs.	Sex	Total daily dose mg.	Sched.	Dose mg.								
1	JEW	75	M	37.5 75.0	t.i.d. t.i.d.	12.5 25.0	4/26/56	Cerebral arteriosclerosis w/ Parkinsonism. Treated nearly 1 yr. with repeated courses Trihexyphenidyl w/ anticholinergics and reserpine. No benefit.	4/26/56	1 5	<p><i>Speech</i>—Incoherent, indistinct, thick, slow and drawn, irrelevant.</p> <p><i>Motor activity</i>—Greatly retarded, musculature of extremities and trunk very rigid, coordination poor. Scissors gait, festination, marked swaying (Romberg test) and pill-rolling tremors. Practically helpless; unable to care for, feed, dress or undress self without assistance.</p> <p><i>Mood</i>—Irritable, changeable, aggressive at times, suspicious of family.</p> <p><i>Thought content</i>—Delusions, visual and auditory hallucinations. Once thought night nurses were horses.</p> <p><i>Mental ability</i>—Loss of memory, recent and remote; no retentiveness. Deterioration rapid and steady as with organic dementia.</p> <p><i>Appearance</i>—Facies extremely dull, expressionless, mask-like; slovenly.</p> <p><i>Orientation</i>—Confused as to time, place and purpose of examination, but knew name. No insight or pertinent answers to questions, judgment defective.</p> <p><i>Insomnia</i>—Prowled at night despite sedatives.</p> <p><i>Salivation</i>—Marked.</p> <p><i>Visual acuity</i>—Very poor. Sclerotic changes in fundus.</p>	<p>Coherent, distinct, thickness or slowness hardly noticeable, easy to understand. Talks freely, rationally and likes to talk.</p> <p>Much improved, though maybe a little slower than average for age. Rigidity greatly diminished in extremities; spine somewhat less rigid, slightly bent forward. Romberg negative, no noticeable tremors. Walks freely without festination. Normal arm awaying, not yet noticeable. Cares for and dresses self; keeps neat. Likes to walk in corridor after 6 wks, shaved self (first time in 2 yrs) without scratch. Essentially normal, even-tempered, no noticeable irritability or suspiciousness.</p> <p>Normal thought content. Delusions and hallucinations disappeared.</p>	Pronounced improvement	
2	SH	80	M	37.5 75.0	t.i.d. t.i.d.	12.5 25.0	5/ 5/56	Chronic brain syndrome w/ spillover brain disease. Cerebral arteriosclerosis. Parkinson syndrome.	5/ 5/56	1 4	<p>Severe involvement.</p> <p><i>Motor activity</i>—Practically helpless.</p> <p><i>Mental ability</i>—</p>	<p>None.</p> <p>Greatly improved. Reads newspapers. Sees cars from window at 500 feet and distinguishes colors.</p> <p>Improvement only slightly less than in case 1.</p> <p>Much improved. No tremors. No rigidity in posture, walking or skilled movements of fingers. Cares for self.</p> <p>Less improvement than in case 1.</p>	Pronounced improvement	

5	HL	51	F	Congenital phenylketonuria. Involuntary tics. Intractable Parkinsonism.	12.5 12.5 25.0	b.i.d. t.i.d. t.i.d.	25.0 37.5 75.0	1 2 14	Completely helpless, unable to care for self. <i>Motor activity</i> —Tremor, mental continuing	Improved so much family thinks she is cured, and fading symptoms still present. Now walks well, feeds self, keeps tidy and has been permitted visits to family. Still hypochondriacal ideals, childlike behavior. Neat, still tics.	Pronounced improvement
4	MG	37	F	Psychopathic personality. Parkinson syndrome (respiratory). Tremor after removal then improved to former status.	25.0	t.i.d.	75.0	13	<i>Motor activity</i> —completely helpless. Severe tremors. Unable to walk, dress, undress or feed self. <i>Speech</i> —Intelligible, disconnected and irrelevant. <i>Appearance</i> —Untidy, messy.	Started to improve after 3 wks. Now progressing steadily. Now walks straight, dresses, undresses, feeds self. Accompanies mother for walks and shopping. Goes to church, movies, occupational therapy. Tremors and rigidity greatly reduced. Now clear, coherent, relevant, reasonable, although slow. Keeps self tidy, very particular about appearance.	Pronounced improvement
5	JP	69	M	Paranoid state, probably idiopathic. Parkinson syndrome.	12.5 25.0	t.i.d. t.i.d.	37.5 75.0	1 3	<i>Motor activity</i> —Very marked tremors and rigidity.	Tremors greatly diminished. Rigidity reduced in arms, not in legs.	Moderate improvement
6	AB	79	F	Chronic brain syndrome w/ parkinsonian syndrome (asteriosiderotic).	12.5	t.i.d.	37.5	2	Severe involvement. <i>Motor activity</i> — <i>Speech</i> —Staccato repetition of senseless sounds. <i>Mental ability</i> —	Improved in the short time under medication. Moves hands spontaneously; does not keep them for hours in mouth as previously. Rigidity of legs unchanged. Marked diminished jabbering.	Slight improvement but significant for short time of treatment.
7	JL	67	M	Chronic brain syndrome & Parkinsonism (idiopathic). Treated w/ combination of hyoscine, atropine sulfate, scopolamine hydrobromide; diphenhydramine hydrobromide; trihexaphenidyl and diphenhydramine HCl—no benefit.	12.5 25.0	t.i.d. t.i.d.	37.5 75.0	1 7	Slight tremors, rigidity of limbs. <i>Appearance</i> — <i>Salivation</i> —Much drooling.	More alert, follows visitor w/eyes, seems to understand some questions; pertinent, intelligent answers to a few. Smiles. Greatly diminished. Improvement slight. No tremors. Passive movements of limbs much more free.	Slight improvement

TABLE 1 (Continued next page)

TABLE 1 Continued
CLINICAL RESPONSE OF PATIENTS WITH PARKINSONISM UNDER TREATMENT WITH PROMETHAZINE

Patient	No.	Init.	Age yrs.	Sex	Diagnosis and previous treatment	Date started	Promethazine treatment			Dura- tion wks.	Status before promethazine treatment	Status after promethazine treatment	Evaluation of re- sults	Side effects
							Dose mg.	Sched.	Total daily dose mg.					
	8	MH	43	M	Epidemic encephalitis w/ Parkinsonism (postencephalitic). Treated w/ combina- tion of hyocyanine hydrobromide, atro- pine sulfate, scopola- mine, hydrobromide, diphenhydramine, HCl; triphenylmethyl and diphenhydramine HCl;—no bene- fit.	4/27/56	12.5 25.0	t.i.d. t.i.d.	37.5 75.0	1 7	Tremors. Rigidity of right hand. Fingers flexed on palm; considerable force re- quired to pry open and cleanse.	Improvement slight. Noticeable re- duction in rigidity of hand; now fingers can be easily pried back from palm. Tremors can be stopped voluntarily.	Slight im- provement	o
9	JP		61	M	Alcoholic, toxic psy- chosis. Parkinson syndrome (idio- pathic).	5/ 3/56	12.5 25.0	t.i.d. t.i.d.	37.5 75.0	1 3	Tremors, rigidity and saliva- tion.	Coarse tremors disappeared. Rigidity diminishes in recumbency, persists in upright position. Less salivation.	Slight im- provement	o
10	SM		48	M	Chronic brain syn- drome of unknown origin. Parkinsonism (idiopathic)	5/29/56	12.5 25.0	t.i.d. t.i.d.	37.5 75.0 Treat- ment con- tinuing	1 1		Reduction of rigidity in legs is the only change.	Slight im- provement	o
11	JF		50	F	Chronic brain syn- drome. Parkinson syndrome (arterio- sclerotic).	5/ 5/56	12.5 25.0	t.i.d. t.i.d.	37.5 75.0	1 3	Fingers of left hand in forced flexion. Contracture. Rigid- ity and tremors.	Tremors diminished. Fingers of left hand now easily pried open. Legs less rigid, but right foot still in marked plantar flexion.	Slight but noticeable im- provement	o
12	NH		38	F	Mental deficiency with- out psychosis. On admission, hemi- Parkinsonism, left side, now general- ized (idiopathic).	2/ 2/56	12.5 25.0	t.i.d. t.i.d.	37.5 75.0	1 15	Bent down, rigid; shaking very badly.	No noticeable improvement.	Failure	o

DISCUSSION

We consider these results remarkable, not because of the high percentage of general improvement but because of the unusual degree of benefit obtained in one-third of the cases.

No explanation of the results can be offered at this time. The widespread clinical changes may possibly be related in some way to prevention of edema by decrease of capillary permeability.

In view of these preliminary findings it is suggested that promethazine be given a more extensive trial in Parkinsonian syndromes and the mental disturbances associated with Parkinsonism, especially in the aged and in cases of arteriosclerotic etiology.

SUMMARY

Parkinsonism presents a notoriously discouraging therapeutic problem, since no treatment heretofore employed has significantly altered the course of the disease. Recent work with antihistamines suggests that certain of these compounds may have value in the Parkinsonian syndromes.

Promethazine chemically resembles chlorpromazine, which is known to be active upon the extrapyramidal system and related areas. It was decided to investigate the potential value of promethazine since it was believed

that the compound might also affect the extrapyramidal structures but in a different way.

Twelve patients with advanced Parkinsonism (associated with cerebral arteriosclerosis in 5, of the postencephalitic type in 2, and of the idiopathic type in 5) received promethazine in conservative dosage by mouth for periods totaling 2 to 16 weeks.

Among the patients with Parkinsonism, 11 (91%) showed some evidence of improvement, which was not limited to motor activity alone but in most cases involved other physical and behavioral spheres in which there had been severe deterioration. One-third showed clinical change of an unusual degree.

Further study of promethazine in Parkinsonian syndromes and the associated mental disorders is suggested, especially for aged and arteriosclerotic patients.

REFERENCES

1. Doshay, L. J., and Zier, A.: *M. Clin. North America*, 37: 1511, 1953.
2. Goodman, L. S., and Gilman, A.: *The Pharmacological Basis of Therapeutics*. New York: The Macmillan Co., 2nd Ed. 1955.
3. McGavack, T. H., et al.: *Am. J. M. Sc.*, 213: 418, 1947.
4. Budnitz, J.: *New Eng. J. Med.*, 238: 874, 1948.
5. Efron, A. S., and Denker, P. G.: *J.A.M.A.*, 144: 5, 1950.
6. Agate, F. J., et al.: *J.A.M.A.*, 160: 352, 1956.

MEPROBAMATE¹—A CLINICAL STUDY

ABRAHAM GARDNER, M.D.²

During the past 2 years, a group of new drugs has provoked considerable interest. These include the so-called tranquilizers, ataraxics and non-barbiturate sedatives. During this period I have treated and prescribed these drugs for approximately 300 patients in whom tension or anxiety reactions predominated.

In the *Journal of the American Medical Association* of April 30, 1955, there appeared articles by Selling(1) and Borrus(2) regarding a new tranquilizer, "Miltown." These articles presented such impressive statistics and optimistic attitudes regarding this drug that I decided to make my own clinical investigation of its effects. This study was carried out over a period of one year in a series of 109 patients.

Meprobamate (2-methyl-2-n-propyl-1,3-propanediol dicarbamate) is related to mephensin(3) a drug which produced some relief of anxiety symptoms, but was inconsistent and transient in its effects. A long series of compounds was prepared in an effort to overcome these defects(4, 5), and meprobamate is the most recent modification of this series(6). Pharmacological studies showed that, in addition to producing a profound tranquilizing effect without impairment of alertness, the drug was long-acting and consistent in its results(7, 8).

PROCEDURE

When a patient visits his physician he is entitled to as prompt relief or alleviation of distress as can be provided. Such symptomatic relief also facilitates psychotherapeutic procedures. The patient whose attention is largely taken up with his symptomatology often finds it quite difficult to cooperate in psychotherapy. When his symptoms are somewhat relieved, however, he may become much more hopeful of receiving further help, and thus be encouraged to continue with his full program of treatment. With

the aim, therefore, of bringing about symptomatic improvement as rapidly as possible, I have made free use of the amphetamines and barbiturates in past years and, more recently, of the tranquilizers, the non-barbiturate sedative, and meprobamate.

In the present series of 109 cases, I kept all circumstances of therapy as nearly constant as possible by continuing all procedures as before, except that in place of the barbiturates or other sedatives or tranquilizers, I substituted Miltown.

At first I prescribed doses of 400 mg. 4 times a day, then eliminated one of the doses, and finally decided upon a dosage which I consider optimal for initiating this medication; that is, 200 mg. 3 times a day after meals and 400 mg. at bedtime. I arrived at this dosage after observing that at the original dose level about 15 percent of the patients complained of heaviness of the extremities and head, or drowsiness. At the lower dose level these side effects did not occur.

RESULTS

Evaluations of the results of Miltown treatment have been based on 2 criteria: 1. degree of relief of symptoms, and 2. degree of improvement in social and economic adjustments. Patients were rated as *greatly improved* (2+) when remission of symptoms was nearly or very nearly complete and adjustment was good; *satisfactorily improved* (1+) when patients experienced a comfortable easing of symptoms and an estimated 75% improvement in overall adjustment; and *unimproved* (0) when the degree of improvement was estimated as less than 75%.

Results of treatment are tabulated according to these criteria in Table 1. Anxiety reactions have been classified as "acute" when they were of less than one year's duration; "chronic" when the illness had existed for longer than one year. All cases of alcoholism were either underlain by anxiety and

¹ Miltown, supplied by Wallace Laboratories.

² 170 Ocean Street, Lynn, Mass.

TABLE 1

RESULTS OF TREATMENT OF 109 PSYCHIATRIC PATIENTS WITH MEPROBAMATE (MILTOWN)

Diagnosis	No. of cases	Average duration of illness	Average duration of medic.	Degree of improvement			
				Greatly improved (2+)	Satisfactorily improved (1+)	Unimproved (0)	Percent (2+) & (1+)
Acute anxiety reactions	35	3-5 mo.	2-6 wk.	21	10	4	89
Chronic anxiety reactions.....	41	4-5 yr.	3-6 wk.	14	18	9	78
Psychoneurosis mixed types....	10	2 yr.	5-7 wk.	1	6	3	70
Posttraumatic neurosis	7	2½ mo.	2 wk.	5	2	—	—
Alcoholism	7	1 mo.	2 wk.	6	—	1	—
Premenstrual tension	2	5 yr.	2 wk.	1	—	1	—
Schizophrenic affective disorder..	4	3 mo.	2 wk.	—	2	2	—
Obsessive compulsive neurosis ...	1	10 yr.	6 wk.	—	1	—	—
Hypochondriasis	1	15 yr.	2 wk.	—	—	1	—
Tinnitus aurium with secondary anxiety reaction	1	8 yr.	1 mo.	—	—	1	—
Total	109			48	39	22	80

tension, or suffered such reactions during withdrawal.

It will be seen that Miltown was most effective in the acute anxiety reactions where 89% of patients experienced satisfactory improvement or near remission. The chronic anxiety reactions responded somewhat less often—78% of cases—and a larger proportion had to be rated 1+ than in the case of the acutely anxious patients, where 2+ improvements predominated. Other categories appeared to respond best to the extent that anxiety and tension were prominent symptoms.

Because of its muscle relaxant action, meprobamate is very effective in reducing tension. It is also effective in enabling most patients to enjoy what appears to be quite normal sleep, without drugged feeling of after-effects. My impression is that the drug encourages better sleep patterns by easing tension throughout the day, rather than by direct action as a hypnotic.

Most patients who were helped by Miltown noted significant improvement within 3 days to one week. As would be expected, however, chronically disturbed patients needed to continue to take the medication for longer periods, on the average, than acute patients in order to stabilize their gains. Three patients noted improvement during the first week but were unable to maintain this improvement and so were classed as unimproved.

SIDE EFFECTS

As mentioned above, drowsiness occurred in some patients when the dosage was too high. Further inquiry into this complaint led me to the conclusion that what was really meant was a feeling of heaviness of the head and extremities, and a kind of "grogginess." These sensations were, in my opinion, due to the muscle relaxant effect of the drug. This action, which is a unique property of Miltown, undoubtedly gives it special value in relieving tension and inducing sleep. In excess amounts, however, this relaxation makes certain patients uncomfortable and more or less insecure in their regular activities, such as driving their cars or working at machines in factories. Fortunately these effects are avoidable by reducing the dosage.

To date no other side effects have been observed. There were no disturbances of the blood picture, and thus far no suggestion of addictive dependency.

DISCUSSION

Since Fabing (9) first suggested the term "ataraxic" to describe the group of drugs producing "freedom from confusion" and "freedom from disturbance of mind or passion," our experience with these drugs has substantially increased. It seems to me that the time has arrived when clarity would be served by distinguishing 2 classes of drugs according to the two meanings in Fabing's definition.

There are, on the one hand, drugs which primarily free the mind from confusion. They are of greatest use in the psychoses where they show specific blocking action against delusions, hallucinations and other abnormal mental states. They produce a kind of "insulating" effect which makes the patient indifferent to the stimuli in his environment. Chlorpromazine and reserpine fall into this category of drugs, and it is suggested that the term "ataraxic" be reserved to describe this group only.

Miltown belongs in a different category. This drug produces very little effect on psychotic confusion, but successfully controls the "disturbance of mind or passion" which is characteristic of the neurotic anxiety state. Miltown does not have the insulating effect on patients that can be observed in the ataractic drugs. On the contrary, under suitable dosage the patient best describes himself as feeling "normal." He experiences a sense of relief that he can function like his old self again. The term "tranquilizer" might well be reserved for drugs having this normalizing effect.

Miltown would seem to me to be practically the ideal drug for treatment of the disturbed neurotic patient. It effectively allays tension and anxiety without producing central sedation or hypnotic effects. It has no significant side reactions; and so far as I could observe, it produced no tendency to habituation or addiction.

SUMMARY AND CONCLUSIONS

A study was carried out using meprobamate (Miltown) with 109 psychiatric patients over a period of one year. It was found to be a rapidly acting, safe and effective drug, of distinct benefit in those emotional disturbances which are characterized by the prominence of tension, anxiety and their related symptomatic expressions. Eighty percent of patients benefited from Miltown in relief of symptoms and overall adjustment. Greatest improvement was observed in the acute anxiety reactions where 89% were relieved. Drowsiness in overdosage was the only side effect noted. Blood changes did not occur. The author feels that Miltown is a very satisfactory medication for symptomatic relief of tension and anxiety syndromes, and facilitates other psychotherapeutic procedures.

BIBLIOGRAPHY

1. Selling, L. S. J.A.M.A., 157: 1594, 1955.
2. Borrus, J. C. J.A.M.A., 157: 1596, 1955.
3. Berger, F. M., and Bradley, W. Brit. J. Pharmacol., 1: 265, 1946.
4. Berger, F. M., and Ludwig, B. J. J. Pharmacol. & Exper. Therap., 100: 27, 1950.
5. Berger, F. M., and Riley, R. F. J. Pharmacol. & Exper. Therap., 96: 269, 1949.
6. Berger, F. M. Fed. Proc., 14: 318, 1955.
7. Berger, F. M. J. Pharmacol. & Exper. Therap., 112: 413, 1954.
8. Hendley, C. D., Lynes, T. E., and Berger, F. M. Proc. Soc. Exper. Biol. & Med., 87: 608, 1955.
9. Fabing, H. D. Neurology, 5: 319, 1955.

HYSTERICAL STIGMATIZATION

JOSEPH E. LIFSCHUTZ, M.D.¹

The purpose of this paper is to review the history of stigmatization, and to report a case in a patient whose state was not associated with religious ecstasy.

Cases of stigmatization may be divided into two groups, religious and non-religious. As Ferenczi(5) put it, "... the word 'stigma' is historically of clerical origin and formerly indicated the amazing fact that the wound marks of the Christ were transferred to believers by the efficacy of fervent prayer." Klauder notes that "Stigma, a Greek word, means a spot, a sign, a wound or mark branded on a slave. In a figurative sense the word has been used to signify the counterparts of the five wounds in Christ's body appearing on persons affected in a particular way by the Passion."

The first person, and the most famous one, known to have experienced stigmata was St. Francis of Assisi. According to the *Encyclopaedia Britannica*, 1953 edition(2), St. Francis was born in 1181, son of a wealthy merchant. "He was the recognized leader of the young men of the town in their revels, though he was always conspicuous for his charity to the poor." After a serious illness at the age of 21, and after a particular episode of revelry, his friends found him "in a trance, a permanently altered man." He devoted the remainder of his life ministering to the sick and unfortunate, and died at the age of 45 on October 3, 1226.

Two years before his death Francis went up Mount Alverno in the Apennines with some of his disciples, and after forty days of fasting and prayer and contemplation, on September 14, 1224 . . . 'he had a vision: in the warm rays of the rising sun he discerned suddenly a strange figure. A seraph with wings extended flew toward him from the horizon and inundated him with pleasure unutterable. At the center of the vision appeared a cross, and the seraph was nailed to it. When the vision disappeared Francis felt sharp pains mingling with the delights of the first moment. Disturbed to the center of his being he anxiously sought the meaning of it all, and then he saw on his body the Stigmata of the Crucified.' The early authorities represent

the stigmata not as bleeding wounds, but as fleshy excrescences resembling the nails. . . .

Francis was so exhausted by the sojourn on Mount Alverno that he had to be carried back to Assisi. His remaining months were spent in great bodily suffering, and though he became almost blind he worked on with joyousness(2).

A description such as this gives us insight into the personality of St. Francis, and the total dedication of his life to his work. It helps explain the powerful emotional forces leading to the stigmata. As the author of the *Encyclopaedia Britannica* article puts it, "Probably no one has ever set himself so seriously to imitate the life of Christ and to carry out so literally Christ's work in Christ's own way."

Since St. Francis there have been over 300 reported cases of stigmatization, the great majority of them in women. The authenticity of many of these remains in question, some undoubtedly being cases of self-inflicted wounds. Perhaps the most famous recent case is that of Therese Neumann of Konnersreuth, Germany. There are abundant, carefully documented reports in the medical literature concerning this case, and to the best of my knowledge Therese Neumann is still living. She was born on Good Friday, April 8, 1898, and received the first stigmata on the upper surface of her hands and feet on Good Friday, April 2, 1926. It is interesting to note that this was 6 months before the 700th anniversary of St. Francis' death, and one may speculate whether Therese was aware of any preparations in her community or in Germany to commemorate the anniversary. Some commemorations did take place, as noted in an article by E. B. Krumbhaar in the *Annals of Medical History* in 1927(8).

Perhaps the most extensive report in the English literature on Therese Neumann is that of Joseph V. Klauder(6), an American dermatologist. He examined her about 20 years ago, and gives us the following report concerning her. Ewald, quoted by him in several places, is a professor of psychiatry

¹ Address: 43 Moraga Highway, Orinda, Calif.

who had close contact with Therese Neumann.

In March 1918 a fire occurred in the barn of a neighbor of Therese Neumann's employer. When engaged in carrying buckets of water she suddenly felt a cramplike pain in the back. From this time she felt pain when she attempted to lift a heavy object, lost appetite, had insomnia, walked around slowly and was unable to work. She was hospitalized for six weeks—the diagnosis was hysteria after shock. . . . She acquired the conviction that she was ill. After discharge from the hospital she was not entirely well and she was able to do only light housework.

In the summer of 1918 she complained of shimmering light in the field of vision, and vision became impaired. In October, 1918, when attempting to lift a heavy object, she overexerted herself and from then on was unable to walk. She became so ill that her parents thought she was going to die. Vision was much impaired. When an attempt was made to perform an ophthalmoscopic examination, she had what was regarded as an hysterical convulsion. Her physician, to appease her, told her that a vertebra was probably displaced. No roentgen examination was made. All subsequent examinations showed the spine to be normal. About January 1919 she applied for accident insurance and was given the usual accident rate.

She became bedridden, paralyzed, blind and for about one week completely deaf. . . . She vomited blood and bled from the ears. . . .

From 1920 to 1925 she had no medical attention but was nursed by her parents. According to Ewald, she was frequently visited by her parish priest, who, Ewald stated, may have pointed out to her the sufferings of Christ, so that Therese longed to emulate the sufferings of the martyrs and bore her sufferings with a glad heart.

During the time of her illness her father had rheumatism. Therese asked her pastor if she could pray to little St. Therese that she might suffer instead of her father. Soon thereafter she had rheumatic pain in the left arm, and it became flexed. It remained this way for three months. In 1922 a young seminarian had some pharyngeal affliction which threatened to interfere with his studies. Therese prayed to her patron saint, little St. Therese, that she might suffer in place of the seminarian. The following day she experienced difficulty in swallowing, which persisted. . . .

According to Ewald, the time was appropriate for her cure, since she emulated the example of the saints. If the saints could cure others, then she, who took the sufferings of others on herself, could be cured. . . . On the day that little St. Therese was beatified, April 29, 1923, Therese Neumann was suddenly cured of her blindness. Two years later, May 17, 1925, she had a vision in which little St. Therese revealed to her the possibility of cure. . . . She sat up in bed and said that she had talked with St. Therese and that she could now walk.

She got out of bed and with some support walked around the room. . . .

Physical Examination.—The physical examination gave essentially negative results. . . .

The Stigmas.—The time of the first appearance of the stigmas on the dorsa of the hands is obscure. Apparently they appeared suddenly. . . . There was no prodromal pain. The patient denied knowledge of the stigmas of Louise Lateau and of Katherina Emmerich. Soon after the appearance of the stigmas she began having trances and ecstasies, and at that time bloody tears first appeared; later new stigmas appeared over the heart and on the feet. On Nov. 6, 1926, during ecstasy, bleeding appeared on 3 places of the scalp. Now there are 8 places. After 1927 stigmas appeared on the palms and the soles. In the beginning there was a constant but slow oozing of blood from the stigmas; later only some of them bled, and only on Friday. During the Passion of the Holy Week there was bleeding from all the stigmas.

As recorded by Ewald, the stigmas were not penetrating wounds, although there was a subjective sensation of penetration. . . .

The Ecstasy.— . . . the ecstasy began every Thursday between 11 and 12 o'clock and lasted until Friday afternoon. Therese would awaken suddenly from sleep, partly sit up and remain motionless for a short period. She would become deadly pale, with eyelids half closed and hands stretched out; blood tinged tears would run down her face and clot on her chin and neck. After five or ten minutes she would sink back into the pillows and appear exhausted. . . . When asked questions she would describe in a low voice what she had seen. Apparently she would live the whole scene at Calvary, following Christ at each step. In the final hour, when she would experience the Crucifixion, she would sit for the whole hour in a half-upright position, with arms extended and eyes wide open and staring. . . .

She described her visions as not like pictures, but as vivid and colored. Her description of Jerusalem is said to be accurate. The Aramaic dialect is said likewise to fit properly the person whom she quotes (6).

To my knowledge these descriptions have not appeared in the American psychiatric literature. The case of Therese Neumann, showing such extraordinary suggestibility, is reminiscent of severe cases of hysteria reported by Freud, and by Charcot and Bernheim.

In 1943 William Needles (10) reported a case of observed stigmata occurring in the course of psychoanalysis. There are only the most scattered reports of stigmatization occurring not in association with religious ecstasy. Needles' case, being observed directly in analysis, is more unusual still.

His case was of a man, age 31, in analysis 5 months, who on 3 occasions was noted to bleed from the pores of his hands. Needles was able to relate each episode of the bleeding to an immediately preceding conflictual situation, in each case stirring up Oedipal strivings, fantasies and guilt feelings. "All three episodes of stigmatization were precipitated by situations reminiscent of the Oedipus . . . Their (the stigmata's) psychological importance is their significance to the patient to whom they meant blood . . . (He was) constantly recoiling from and punishing himself for his aggressive tendencies." This patient, by the way, was not a Catholic.

Needles notes other cases of non-religious stigmatization. A girl who saw her brother punished by having to run a gauntlet soon thereafter exhibited bleeding on her back at the same site as her brother's wounds. The witness of an encounter between a French and Russian soldier became terribly frightened and soon developed bleeding wounds corresponding in location to those of the French soldier. According to Klauder, in the days of Liebault, Charcot and Bernheim when hypnosis was much in vogue, all varieties of cutaneous lesions—erythema, vesicles, bullae, papules, lesions resembling burns, ecchymoses, bloody exudates from previous dermatographia—were all reported as produced through suggestion in hypnosis.

Helene Deutsch(1) describes similar dermatologic manifestations of converted sexual impulses.

We often find such manifestations of repressed onanism in analysis, sometimes as disturbances in the motor, and sometimes in the vaso-motor, sphere. I have often seen cases in which the patient's hand would swell up and become red whenever his associations led him to memories of repressed masturbation. Such a symptom represented a kind of shame-reaction, like, say, blushing, and contained also a self-betrayal, a self-reproach in the face of the analyst(1).

At this point I should like to report a case of non-religious stigmatization of a specific kind.

This was a patient I saw only 4 times, and in whom the stigmatization was not observed, but reported from her past. The patient was a particularly sober and serious-minded person, and there was little question in my mind concerning the authenticity of her report. Her stigmatization fits in well with her personality functioning, and I take her report to be authentic.

She was a 46 year old white married telephone company worker who presented herself for sleep-

lessness, depression and gastric distress. She was married for the third time. Her first marriage ended with her husband's death from cancer after 14 years of happy marriage. She was 38 at the time. She married again briefly and unhappily 2 years later, and had at the time I saw her been married 3 years, happily, at least on the surface. There were 2 sons from the first marriage.

Her religious history is significant. She was one of 11 children, raised in a big city, in an Italian Catholic family. Her mother became deaf at her birth. Her father was extremely cruel and tyrannical to the mother and all the children, beating them unmercifully. She and her siblings would call in the authorities after these beatings but her father was never prosecuted.

She was raised rather perfunctorily in the Catholic faith. Father never attended church and neither did mother, being deaf. At the age of 11 the patient began working in the garment industry, and at the same time, on her own initiative, with little family opposition, she joined the Congregational Church. Her first husband and children were Congregationalists, and there was complete religious harmony in their home. Her present marriage was to a Catholic, and it was my impression that her anxiety and tension symptoms for which she came to me were due to her inability to follow the Catholic faith. She was trying to live as her husband wanted her to, but yearned for the placid days when the family members were all Congregationalists, and lived harmoniously. She had a previous episode of depression requiring shock therapy in May 1955, 2 years after her third marriage, and she came to see me in May 1956. Our brief contact with her ended because of a serious intercurrent eye disease that prevented her returning to me. I had worked out with her the clear religious conflict, and she felt she could only be happy in the faith of her choosing, rather than her husband's. She intended to return to the Congregational Church, and she said her husband would agree to this if it would restore her mental and emotional balance.

When she was 13, the patient's father scratched her down her back with his fingernails, leaving 3 long scars. These healed over in time. Four years later, at the age of 17 she had left home because of her father's brutality, and was living in the country with her brother. I am not sure for how long she had not seen her father, but it is my impression it was many months, perhaps over a year. Somehow her father found out where she was, and announced he would pay a visit. The patient reports now that as the time of his visit approached, her old back scars, which had been healed for 4 years, would redden and bleed. Her conscious affect at the time was one of fear of her father. When he did arrive he was no longer cruel to her or her brother. This reddening and bleeding of the three old healed scars would recede spontaneously, but these episodes recurred several times, each with the anticipation of a visit from father.

Again I must say that the sobriety and care to be

explicit and correct that this patient exhibited increases the probability of her stigmatization. This case is slightly different from others reported, in that there was a past specific physical trauma to which the hysterically induced bleeding attached itself. Yet it seems to me that such bleeding, 4 years after a physical trauma, can be considered a type of stigmatic bleeding.

It is unfortunate that no further data are available concerning this patient, and that we can only hypothesize concerning the psychodynamics of her stigmata. She may have identified the authoritative childhood Church with the authoritative father, both of whom she rejected. Her bleeding, however, need have had nothing to do with the Church, but may have been an expression of the repressed incestuous Oedipal fantasy so characteristic of hysteria. The rape did symbolically occur, at the age of thirteen, in the father's sadistic attack.

A final point is of interest. After years of saying in her adult life, "I'll never help him," when her father was seriously ill in November 1955, she donated blood to him.

To pursue further the psychodynamic implications of stigmata in general, we quote Ferenczi (5) as follows:

... common to traumatic hemianesthesia and hemianesthetic stigmata is the exclusion from consciousness of touch stimulation, along with the preservation of the other psychic uses of this stimulus. We saw in the anxiety hysteric that the insensibility of one half of the body was used to employ the unconscious sensations ... for the 'materialization' of the Oedipus phantasy. ...

Hysterical stigmata signify the localization of converted excitement masses at parts of the body which, in consequence of their peculiar suitability for physical predisposition, are easily placed at the disposal of unconscious impulses, so they become 'banal' companion manifestations of other hysterical symptoms ideational in origin.

And as Fenichel (4) so succinctly puts it:

Monosymptomatic hysterics frequently demonstrate Ferenczi's conception of hysterical 'materialization' and 'genitalization.' Repressed thoughts find their substitute expression in a material change of physical functions, and the afflicted organ unconsciously is used as a substitute for the genitals. This 'genitalization' may consist of objective changes within the tissues, for example, hyperemia and swelling, representing erection; or it may be limited to abnormal sensations imitating genital sensations. The so-called stigmata belong to this category.

With regard to the transparently converted sexual impulses involved in such hysterical reactions, one may recall a time in religious history when such unconverted impulses were most directly expressed. The historian, Herbert Muller (9) notes:

Also touching are the innocent but passionate yearnings of medieval nuns, who wrote constantly of 'panting with desire' for the God incarnate, and of their intimate ecstasies when the desire was fulfilled. Mary of Ognies spent thirty-five days in silent trance, broken now and then only by the words 'I desire the body of our Lord Jesus Christ.' The saintly Luitgard of Tongern had more rapturous transports; 'I am my Beloved's,' she exclaimed, 'and His desire is towards me.' Sister Mechthild of Magdeburg had glowing visions of the 'beautiful Youth Christ,' who spoke to her in lovers' language and called her to the 'couch of love.' 'I am a full-grown bride and will have my Bridegroom,' she rhapsodized; and in her supreme ecstasies she became 'Bride of the Trinity.' Writing before the heyday of Freud, the historian Henry Osborn Taylor asked: 'Are these virgins rewarded in the life to come with what they spurned in this?'

Hysteria and hysterical stigmatization appear to be psychopathological entities where the conversion of sexual urges are only somewhat more subtly disguised than these reports from the medieval cloisters.

SUMMARY

The history of stigmatization has fascinated observers from the time of St. Francis of Assisi in the 13th Century to the present. That history is reviewed here. Carefully detailed studies of a modern stigmatized person, Therese Neumann, reveals a seriously disturbed young woman, a severe hysterical personality. One even suspects psychotic disturbances before her stigmatization.

Far more rare are reports of non-religious stigmatization. The most striking report is that of William Needles in a case undergoing psychoanalysis. The classical psychodynamic interpretation of hysterical stigmata by Fenichel and Ferenczi is quoted in which they are seen as hysterical "materializations" or "genitalizations." A non-religious stigmatization is reported in this paper, in which the Oedipal conflicts and ambivalences seem to be directly expressed.

BIBLIOGRAPHY

1. Deutsch, Helene. *Psycho-Analysis of the Neuroses*, p. 70. London: Hogarth Press, 1951.
2. *Encyclopaedia Britannica*, ed. 1953. Francis of Assisi, St., Vol. 9: p. 673.
3. *Encyclopaedia Britannica*, ed. 1953, Stigmatization, Vol. 21: p. 406.
4. Fenichel, Otto. *Psychoanalytic Theory of Neurosis*, p. 219. London: Routledge and Kegan Paul, 1945.
5. Ferenczi, Sandor. *An Attempted Explanation of Hysterical Stigmatization in Further Contributions to the Theory and Technique of Psychoanalysis*. London: L. and V. Woolf, 1926.
6. Klauder, Joseph V. *Archives of Derm. and Syphil.*, 37: p.650, 1938.
7. Klauder, Joseph V. J. *of Nerv. and Men. Dis.*, 84: p. 249, 1936.
8. Krumbhaar, E. B. *Annals of Medical History*, 9:2, p. 111, 1927.
9. Muller, Herbert. *Uses of the Past*, p. 247. New York: Oxford Univ. Press, 1950.
10. Needles, William. *Psychoan. Quart.*, 12:23, 1943.

DIFFERENTIAL EFFECT OF FACTORS IN AN ACTIVITY THERAPY PROGRAM¹

DAVID LEVINE, PH.D., HARRY K. MARKS, M.D., RICHARD HALL, ED.M.²

Recent literature stresses two factors in activity therapy programs which are likely to have an impact on the mental patient. The first to receive attention concerns the nature of the activity to which the patient is assigned. Huntting and Semrad(1) stress the fact that activities for each patient must be prescribed on an individual basis. Although this variable is still recognized as important, a second factor, focussing on the personality of the therapist, has recently overshadowed it in the psychiatric and rehabilitation literature. The new emphasis is a result of an increased awareness that disturbances in interpersonal relations are a factor in mental illness(2, 3). Despite the extensive clinical literature, there are no well-controlled studies of either of these factors in relation to the activity therapy program. The present investigation utilizes a factorial design in an attempt to explore simultaneously the effect of different activities and different therapists on the behavior and symptoms of mental patients.

HYPOTHESES

The present study is designed to investigate the hypotheses that 1. symptomatic changes in mental disorder are related to the personality of the activity therapist with

whom the patient comes in contact, and 2. that symptomatic changes in mental disorder are related to the nature of the activity to which the patient is assigned.

PROCEDURE

Eighty functionally psychotic patients on an acute intensive treatment ward in a VA neuropsychiatric hospital were selected as subjects from a ward of about 150 who the ward physician felt would remain hospitalized for at least 3 months. The age of the subjects ranged from 20 to 61 years, with a mean of 36. Total number of months of psychiatric hospitalization ranged from 1 to 242 months with a mean of 52. The subjects were matched for age and total number of months of previous psychiatric hospitalization, and then randomly assigned to 4 experimental groups.³ All patients were receiving some form of tranquilizing medication, prescribed by the ward physician without knowledge of the experimental group to which each patient was assigned.

The 4 groups were assigned to 2 therapists (2 groups each) who differed markedly in their experience, character structure, and attitudes toward people as determined by supervisors' ratings and projective tests. On the basis of the psychological tests, Therapist A was described as "an outgoing, relaxed individual who is interested in people . . . has a great deal of energy and enthusiasm and sense of humor which is likely to bring forth emotional responses from the patients." Therapist B was described as "considerably less interested in people . . . preoccupied with his inner reactions. . . . He is likely to be critical and compulsive . . . his relationships with them (patients) would be characterized by distance and lack of emotional involvement."

¹ This study is an Individual Hospital Project undertaken in connection with the Veterans Administration Psychiatric Evaluation Project, directed by Richard L. Jenkins, M. D. We should like to express our gratitude to the staff of this project for granting permission to use the Symptom Rating Scale and the Psychiatrist's Rating Scale designed by them; to Mrs. Carola Mann who administered and interpreted the psychological tests; and to the 2 therapists. Also to members of the PMR staff and to Miss Adele Matelson, R. N., and her staff.

This paper is published with permission of the Chief Medical Director, Department of Medicine and Surgery, V.A. who assumes no responsibility for the opinions expressed or conclusions drawn by the authors.

² Dept. of Psychology, University of Nebraska, Lincoln, Neb.

³ The subjects were matched in 4 age categories, 1. 24 and under, 2. 26-35, 3. 36-45, and 4. 46 and over, and in 4 length of hospitalization categories: 1. 4 months and under, 2. 4 to 12 months, 3. 1 to 3 years, 4. over 3 years.

Each therapist saw one group of patients on a lawn-mowing detail and the other group in an occupational therapy situation (O.T.). The patients in the lawn-mowing detail were allowed no choice of activity; they were all told what to do and when to do it. The patients in O.T. had a variety of activities (such as wood-working, painting, ceramics, metal-work) to choose from, with each patient given individual guidance and attention. There was ample opportunity for "creative self-expression." Each group was in the experimental situation for an entire morning or an entire afternoon. The rest of the day's activity was standard for the 4 groups.

Sixty-two of the original 80 patients completed 8 or more weeks in the project. Most of the other 18 patients were transferred from the participating ward for administrative reasons. Analysis of the drop-outs revealed no bias in this regard.

After 12 weeks, each patient was rated by the ward psychiatrist (H.K.M.) on the Psychiatrist's Rating Scale. This scale consists of 10 sub-scales: readiness for discharge, withdrawal, depression, disorder of thought, suspicion, excitement, unrestrained impulsiveness, excessive hostility, somatic complaints, and hospital adjustment. There were 4 possible ratings on each sub-scale:

- 1:.....worse
- 0:.....no change
- 1:.....improved
- 2:.....much improved

A Mean Improvement Score on each patient was obtained by adding the scores on the 10 sub-scales and dividing by 10. The rater did not know to which experimental group the subject was assigned.

RESULTS

As indicated in Table 1, the lawn-mowing details showed more improvement than did

the O.T. groups as measured by the Mean Improvement Score. This difference (.67-.39) yielded a "t" of 3.11 which is significant at the .004 level.*

Patients assigned to Therapist A, who had been judged a "better therapist," improved more than patients assigned to Therapist B. This difference (.61-.46) yielded a "t" of 1.67, which is significant at the .05 level. (A one-tailed test of significance was used here since the direction of the difference had been predicted in advance by the supervisors and psychologist.) Since all 4 groups showed improvement, it would be erroneous to conclude that Therapist B did not help his patients. The interpretation which is indicated suggests that, within the confidence limits stated, Therapist A's patients improved more than those patients assigned to Therapist B.

The sub-scale scores were also analyzed and it was found that the greater improvement shown by the lawn-mowing details did not exist with respect to all symptoms. The difference between activities was significant on the following scales:

- Readiness for discharge..($P \leq .01$)
- Withdrawal($P \leq .01$)
- Depression($P \leq .01$)
- Hospital adjustment($P \leq .02$)
- Disorder of thought.....($P \leq .05$)
- Suspicion($P \leq .05$)

Differences on the other scales (impulsiveness, hostility, excitement, and somatic complaints) were not significant. Patients assigned to Therapist A improved significantly more than those assigned to Therapist B on the following scales:

- Suspicion($P \leq .01$)
- Readiness for discharge..($P \leq .05$)
- Disorder of thought.....($P \leq .05$)

*It should be noted that Bartlett's Test of Homogeneity of Variance was applied to the Mean Improvement Scores as well as to the sub-scale distributions. Using .05 as the required level of confidence, it can be stated that there was homogeneity of variance for the Mean Improvement Score and all sub-scales, excepting excitement, depression and hospital adjustment. Analysis of Variance techniques yielded no significant interaction effects.

TABLE 1

MEAN IMPROVEMENT SCORES

Therapist	"O.T."	Lawn-mowing	Combined
A .....	.47	.74	.61
B .....	.30	.59	.46
Combined .....	.39	.67	.54

Ratings on an analogous scale, made at the outset of the study, were available for most patients on 4 of the 6 symptoms which showed significant differences between groups. Statistical tests (Analysis of Variance) revealed no significant initial differences between groups in withdrawal, depression, thinking disorder or suspicion. It must be noted, however, that despite the absence of significant differences, the mean score of the group which improved most was in the direction of least pathology. Although none of the statistical tests leads us to believe that this constituted a bias, this possibility cannot be ruled out unequivocally.

DISCUSSION

The findings support both hypotheses, *i.e.*, symptomatic changes in mental disorder are found to be related to both the personality of the therapist and the nature of the activity to which the patient is assigned. These psychological variables warrant further investigation. They are amenable to scientific study and appear to be of sufficient importance to be reflected in the patient's behavior, symptomatology and readiness for discharge.

The present findings strongly suggest that the widespread belief in "creative self-expression" as the most valuable therapeutic endeavor for hospitalized mental patients is in error. There are several possible explanations for the unexpected finding that "lawn-mowing" has a greater impact on the patient than "O.T."

One possibility was offered by the therapists who, during the second month of the experiment, reported that contrary to their expectations, the patients in the lawn-mowing details seemed to be improving more than the "O.T." patients. They had the impression that more group feeling and more patient interaction existed in the lawn-mowing details. In the O.T. groups, each patient worked alone on an individual project under the guidance of the therapist; there was no shared work and no common goal as was the case in the lawn-mowing groups. During the lawn-mowing the patients were usually instructed to work in unison and in a set for-

mation in order to cover a specified section of grass. It seems indicated that further research in the psychology of group formation, group structure and group cohesiveness would be important to the planning and administration of mental institutions.

A second possible factor in the increased improvement shown by the lawn-mowing groups relates to the dimensions of "work" and "play." It is possible that the patients interpreted the lawn-mowing as a necessary hospital maintenance job, while "O.T." was seen more as "play therapy." If this is true it may follow that greater ego gratification ensued from a real job well done, than from "busy work."

A third possible explanation is the greater need for planning and decision-making in the "O.T." shops. The projects undertaken by the patients were difficult and complex; there was, consequently, more chance for errors of judgment. These mistakes would often lead to frustrating experiences and place the patient under great stress. With the lawn-mowing detail, on the other hand, the patients did not encounter this kind of frustration and stress.

The findings also support the notion that the personality of the therapist is an important factor in the PMR program. Much more research in this difficult and subtle area remains to be done. The use of projective techniques seems to be worthwhile.

SUMMARY

Eighty patients on an acute intensive treatment ward of a Veterans Administration neuropsychiatric hospital were divided into 4 groups matched for age, diagnosis and number of months of previous psychiatric hospitalization. Each of 2 trained activity therapists took one of these groups daily for a half day in a traditional occupational-therapy type of situation and one group daily for a half day on a lawn-mowing detail using hand mowers on the hospital lawn. After 12 weeks the degree of improvement shown by each patient was rated by the ward psychiatrist who did not know the assignments of the particular patient.

The results indicate that the nature of the therapeutic activities differed, and that these important differences, plus the wide differences in the personalities of the therapists, greatly affect patient improvement and readiness for discharge. Patients mowing the lawn showed significantly more improvement than patients working in O.T. ($P=.004$). It would appear that for the type of psychotic patient included in this study, the simple, co-operative and useful activity of mowing the

lawn is more beneficial than the less vigorous, more potentially creative, more complex, but possibly more isolated activity of individual occupational therapy projects.

BIBLIOGRAPHY

1. Huntting, I., and Semrad, E. U.: *Am. J. Occup. Ther.*, **6**:262, 1952.
2. Jenkins, R. L.: *Arch. Neur. Psych.*, **64**:243, 1950.
3. Goodrich, D. W.: *Am. J. Occup. Ther.*, **6**:1, 1952.

THE SOCIAL MALADJUSTMENT UNIT: A COMMUNITY WIDE APPROACH TO THE PROBLEM OF DELINQUENT BEHAVIOR¹

NATHAN BLACKMAN, M.D., THOMAS T. FLYNN, M.D., THOMAS P. MELICAN, M.S.W., JOHN G. NAPOLI, PH.D., AND JAMES M. A. WEISS, M.D.²

It is assumed in current psychodynamic theory that delinquent, antisocial, and even self-destructive behavior indicates a lack of superego strength, a "deficiency in conscience." More recently, Wolff (1) and others have suggested that persons exhibiting such behavior also manifest an apparent lack of group allegiance, a need to deviate from and attack social mores. It is difficult to understand, however, what it means for the delinquent person to exist in our social structure with this obvious void, this definite lack of social values. How isolated and different does this make him? How sensitive does he become to his inability to interact? How much does an "anonymous" urban existence accentuate and deepen his awareness of not relating, of remaining isolated (2)? How devious and divisive are the efforts of the delinquent to overcome, to shatter this sense of aloofness, of being different (3, 4)? How important is it for him to deny this latent awareness of rampant ambivalence as to special identity, status, and rightfulness in maintaining adult roles in the complex, intimate and ever-varying relationship between human beings (5, 6)?

With these considerations in mind, a Social Maladjustment Study Unit was organized at Malcolm Bliss Psychiatric Hospital and has functioned since July, 1956.³ This unit has

served as an interdisciplinary research, teaching and consultation center, focusing on problems which are common to psychiatry and law; and contributing to the study, understanding and eventual social readjustment of individuals involved in aggressive antisocial or delinquent acts. Emphasis has been placed on interrelationships between individual deviant behavior and socio-environmental factors, and on understanding both the intrapsychic determinants and the interpersonal and community origins of social maladjustment.

With increasing recognition that individual antisocial behavior concerns the community as a whole, it became apparent that collaboration of many disciplines representative of the community's assets would be important. This concept of interdisciplinary cooperation has been recognized clearly in attempts to investigate and control juvenile delinquency, but was found to apply equally well in dealing with adult social maladjustment. The community as a whole must contribute knowledge and share responsibility.

In addition to the psychiatric team, therefore, our unit has regularly invited representatives of other social disciplines in the community to participate actively in our weekly case presentations. Group representatives at these seminars have ranged from judges and police officers through teachers, lawyers, and ministers, to welfare and social service workers. By actively utilizing all available community resources in the evaluation and treatment of socially maladjusted persons, the study unit has been a potent force in transmitting to the disciplines represented at the seminars, and ultimately to the community at large, the concept of total societal concern and responsibility for the conditions involved in the genesis and continued existence of delinquent behavior.

¹ Read in the Psychiatry Section at the 9th annual meeting of the American Academy of Forensic Sciences, Chicago, Ill., March 2, 1957.

² From the Malcolm Bliss Psychiatric Hospital and Clinic; the Department of Psychiatry and Neurology, Washington University School of Medicine; and the Department of Psychology, St. Louis University; St. Louis, Mo.

³ The activities of the Social Maladjustment Study Unit have been made possible through the continuous cooperation and contributions of Drs. Gladys Cordero, Rosella E. Jones, and Edith E. Trugly (who with the authors have formed the core of the Unit); of Dr. George A. Ulett, Medical Director of the Malcolm Bliss Psychiatric Hospital, and his staff; and of the many active participants from the community.

ORGANIZATION AND STRUCTURE

Referrals to the unit have been made from circuit and municipal courts, and from local penal, legal and social agencies. Psychiatric residents assigned to the unit evaluate each patient referred, and select those to be presented at the unit seminars. The resident then arranges for a complete psychiatric work-up and for the presence of representatives of appropriate community resources at the seminars. In addition, the psychiatric resident is assigned to the city courts for a 2 week period, during which time he learns the structure of court procedures, becomes familiar with the types of cases handled by the Courts, and attends all court hearings requiring psychiatric testimony.

CURRENT PROGRESS

Since the unit started, a large number of studies have been completed. Problems investigated ranged from sexual deviation through attempted suicide to robbery and murder.

Announcements of typical case presentations and related comments follow:

1.—"This patient is a 34-year-old, white male, who has had over 40 admissions to City Hospital for alcoholism and its complications. This case will be discussed with representatives of Alcoholics Anonymous, Salvation Army, St. Louis Bureau for Men, and the 2 judges of the St. Louis Police Court."

This patient demonstrated a tenuous relationship to his environment, a schizoid character, and a repetitive pattern of escape into hospitalization; in addition, a paucity of social resources and a lack of meaningful interpersonal interactions. Participants such as the Salvation Army captain and the A. A. leader contributed their experiences in rehabilitation work with alcoholics. The emotional components of chronic alcoholism, the constant regressivity to dependent oral needs, were contrasted with the socializing pattern of the rehabilitative process.

The results of group discussion included a mutual area of understanding and not condemning, a respect for each other's field of endeavor, and a common, shared and thoroughly understood concept of the alcoholic, as well as a readiness for future work on this difficult problem.

2.—"The case of a 16-year-old boy who stole an automobile will be discussed with the boy's teachers, representatives of the Pupil Welfare Department of

the St. Louis Public School System, and the Juvenile Probation Department."

In this case discussion centered about the history of a deprived home, an absent father, and a mother who never made any emotional investment in the children and who constantly placed responsibility for their care on social agencies. The patient's pattern of acting out, his need to obtain immediate gratifications and his inability to plan for long term goals were elaborated.

Participants reviewed the availability of treatment facilities in the community. It became apparent that no place was really available for the long term management of the unstable juvenile delinquent. Discussion of the need for sustained, consistent application of retraining was participated in by the ministers, police officers of the Juvenile Division, and the parole officer. A common meeting ground was achieved in consideration of the importance of detection and prevention of community foci of juvenile misbehavior.

3.—"The case of a 91-year-old man who is senile and charged with child molestation will be presented. The Medical Director of the Hospital for the Criminally Insane, the Circuit Attorney, the Circuit Court Judge, and a member of the Social Planning Council will participate in a discussion of the placement of the senile sex offenders."

This case of a senile, regressed, and completely confused individual facing court proceedings because of child molestation was presented for discussion to clarify the problems of court handling and disposition of emotionally disturbed senile offenders. An effort was made to explore the possibility of pre-trial investigation, thus avoiding criminal proceedings in offenses obviously stemming from senile deterioration.

Subsequent discussion provided an opportunity to review the treatment program at the Hospital for Criminally Insane, some of the legal problems involved in discharging criminally insane upon their recovery, and means for providing a better follow-up for such patients upon their return to the community.

4.—"A 25-year-old white male charged with murder, whose case presents some of the features found in the Durham case, will be presented. Members of the St. Louis Bar will participate in the discussion of the psychiatric and legal implications of the Durham decision."

This patient was an extremely unstable and socially isolated person, who had been in constant clashes with authority since early adolescence. His army career was punctuated with repeated acts of

insubordination and prolonged periods of hospitalization (during which a variety of diagnoses— from antisocial personality to paranoid schizophrenia— were made). Within 3 months after his discharge from the army, in the midst of a drunken fracas, he slashed to death a bystander.

The patient was aware all his life of being isolated, estranged and non-involved in interpersonal relationships. He had a constant urge to create hostility and to escape from this by becoming a public or hospital charge. He trusted no one. He resorted to alcohol as a means to lighten this sense of isolatedness, but alcohol only brought out surges of hostile, destructive behavior, ultimately leading to the present offense of murder. Both the prosecuting and defense attorneys discussed the applicability of the Durham case decision and the inadequacy of the McNaughton rules in this case. The over-all philosophy of punishment as a social deterrent was thoroughly considered.

DISCUSSION

The socially maladjusted person has been described as a group deviate who needs total community acceptance and understanding in coping with his needs. He may well represent, in part, a product of the anonymity of urban existence. He often demonstrates as well a compulsive need to crash through a sense of isolation or rejection, which he has absorbed from childhood years of being shunned, excluded or misunderstood(7). Aggressive anti-social acts may be viewed as a means for a tenuous identification with (and expression of resentment against) society, creating fears and hostilities which substitute for—and are easier to cope with than—those resulting from earlier frustrating parental relationships.

With these concepts in mind, recent studies on the results of prolonged isolation on the individual appear to be relevant(8). The ability of individuals to survive prolonged periods of physical isolation in the Polar region or sailing alone in the Pacific seems to be related to an element of faith or conviction in survival. Stress due to experimental isolation produces results similar to that following natural isolation: that is, if one is alone long enough, the mind turns inward and projects outward its own contents and processes. Here again, as with the prisoners of war in Japan or Korea, the crucial factor in survival under such extreme stress appears to lie in the ability to maintain faith in eventual

rescue, and also to have others with whom to share that hope(1). Thus a sense of identification with social groups and their mores may provide extremely effective support in maintaining a necessary level of morale to persevere and eventually to survive.

Perhaps, then, social maladjustment may be related to a degree of isolation and a coincident need to project out onto the environment certain intrapsychic fantasies (just as the experimentally or naturally isolated person projects his hallucinations onto his environment). If the socially maladjusted person is viewed as limited or inhibited in his communication with the environment, his antisocial behavior might be itself a deviated form of non-verbal communication, an aberrant expression of an urgent need for social interaction, and not only an expression of his need to invoke punishment or retribution. This defect in, or deviation from, the usual sense of social belonging will then be accentuated in communities which ignore the problem or prepare no remedies to meet it.

Because of his long-standing dependency needs and emotional insecurity, the socially deviated person is unable to participate in group allegiance or social coexistence. His arrogant aggressive antisocial acts, intended partly as rejecting and punishment invoking, and his divisive, evasive dynamic manipulations arouse hostility in members of the community which makes it difficult to carry out constructive planning. If, however, such acts are studied and understood as representing more or less compulsive needs—tenuous, frequently irrational, most often infantile and partly sado-masochistic, but needs nevertheless—of the individual to establish some interaction with the environment, it may be possible to work through the hostile feelings created in us by the act, and thereby to deal with the problem in a rational and intelligent manner.

The creation of the Social Maladjustment Study Unit has provided effective means of encouraging and disseminating such understanding of delinquent behavior throughout the community. Representatives of the community's social resources: law, penology, sociology, anthropology, education, religion, industry, and health and social agencies, in

conjunction with members of the psychiatric team, form a dynamic but unified group, participating in a mutually enlightening, creative sharing of concepts and values. Through such interaction increased tolerance and easier acceptance of social deviation become possible, and a marshalling of resources and willingness to assume responsibility in dealing with this problem appears inevitable. And, as more and more persons in the community are alerted to the problems involved, total community action toward preventive and rehabilitative goals in dealing with social maladjustment becomes feasible.

SUMMARY

A Social Maladjustment Study Unit was organized at Malcolm Bliss Psychiatric Hospital in July, 1956, to serve as an interdisciplinary research, teaching and consultation center focusing on the study, understanding and eventual social readjustment of individuals involved in aggressive antisocial or delinquent acts. Emphasis has been placed on collaboration of many disciplines representative of the community's assets. Thus lawyers, parole officers, judges, teachers, ministers and other group leaders have participated in the evaluation of each medico-legal problem, ranging from homosexuality to forgery, incest, and murder. In each case, an attempt is made to understand the motivation of the individual delinquent, the group alienation

processes he presents, the possible measures toward his rehabilitation which might be effected within the community, and the probable intrapsychic determinants and interpersonal and community origins of his maladjustment (in terms of structuring group participation within the community toward preventive action in future similar cases).

The research theme of the Study Unit stresses exploration of delinquency as an expression of social isolatedness, and antisocial acting out as a compulsive need to break through this sense of aloneness and isolatedness from meaningful social interaction; as well as investigation of the role of community action as a function of alertness to the emotional and social needs of the individual offender rather than the mere exercise of punitive or repressive measures.

BIBLIOGRAPHY

1. Wolff, H. G. *Saturday Review*, p. 42, Jan. 5, 1957.
2. Blackman, N. *Missouri Med.*, 51: 102, 1954.
3. Bell, R. G. *J. Soc. Therapy*, 2: 171, 1956.
4. Blackman, N. *J. Missouri M. A.*, 47: 814, 1950.
5. Rapaport, W. *J. Soc. Therapy*, 2: 166, 1956.
6. Guttmacher, M. S., and Weihofen, H. *Psychiatry and the Law*. New York: W. W. Norton, 1952.
7. Blackman, N. *Postgrad. Med.*, 10: 499, 1951.
8. Lilly, J. C. In *G. A. P. Symposium No. 2*, p. 13, June 1956.

A BIO-PSYCHOLOGICAL APPROACH TO SOMATIC TREATMENTS IN PSYCHIATRY

GORDON T. HEISTAD, PH.D.¹

Behavioral science rests firmly on the assumption that behavior does not occur by chance but, rather, consists of responses to stimulation. Without this assumption of lawful relationships between stimuli and responses, psychology, psychiatry, education, and other fields of behavioral study can find little justification for calling themselves even infant sciences. It seems strange, therefore, that stimulus-response relationships are rarely mentioned in any discussion of the behavioral changes resulting from various somatic treatments employed in the practice of psychiatry. Such discussions often leave the impression that perhaps electrons, molecules, and various nuclei in the nervous system get together for a "conference" to decide when, where, how, and why behavior is to be altered. The present paper is intended to perform two functions: (a) to emphasize the fact that somatic treatment procedures do not magically *replace* the lawful stimulus-response relationships which are known to effect behavior; and (b) to suggest one possible mechanism by which various somatic treatments may alter behavior by *application* of lawful stimulus-response relationships.

Some simple stimulus-response relationships seem to be innately determined (e.g., spinal reflexes), but the vast majority of complex behavior consists of functional relationships between stimuli and responses which have been acquired through learning or at least modified by learning processes. Every aspect of the environment which is regularly associated with a response during the learning process may become a part of the total stimulus complex which acquires the capacity to elicit that response on subsequent occasions. In a typical Pavlovian conditioning procedure, a specific tone is regularly associated with a salivation response induced by placing food or acid on the subject's tongue. Subsequently, the tone is observed to elicit salivation without the acid or food. However, maximum salivation requires ex-

act reproduction of the stimulus conditions which prevailed during learning. A change in pitch or intensity of the tone, a change in general noise level, the presence of additional or different experimenters, or moving to a different laboratory will all interfere to some extent with performance of this conditioned response. Each of these examples involves a change in stimulus conditions so that the stimuli presented during test trials are more or less similar to the original stimulus but not identical with the entire stimulus complex. Psychologists employ the term *stimulus generalization* to describe the process by which attenuated responses may be elicited by stimuli that are similar to, but not identical with, the original conditioned stimulus.

In the case of emotional behavior, certain responses become functionally associated with such diverse aspects of the external environment as lights, objects, and persons. For example, if a child is repeatedly burned each time he touches a hot radiator, that radiator will eventually elicit a frightened withdrawal response. However, sight of the radiator also will elicit the complex changes in the internal environment which are characteristic of fear, and these internal changes will occur in a close temporal relationship with the withdrawal response. Since changes in both the external and internal environment are regularly associated with the response during the learning process, we might reasonably expect that maximum strength of the withdrawal response may depend upon exact reproduction of both the internal and external stimulus conditions which prevailed during the learning process. In view of the regularity with which complex changes in the internal environment are associated with a variety of emotional states, we might expect that such aspects of the internal environment may play an important stimulus role in all learned emotional behavior. If this is the case, it should be possible to interfere with performance of previously learned emotional behavior by any treatment procedure which

¹ University of Minnesota, Minneapolis 14, Minn.

changes those aspects of the internal environment which were associated with the learning of that behavior. Such interference would be expected to occur along a gradient of stimulus generalization in such a way that a large stimulus change (internal and/or external) will result in greater interference with previously learned responses than a smaller stimulus change.

The available data are confused and often contradictory concerning the details of physiological changes which are correlated with specific emotional states. However, emotionality in general is accompanied by marked internal changes mediated via the autonomic, endocrine, and extrapyramidal systems under the general control of the hypothalamus and associated diencephalic structures. Changes in blood chemistry and morphology, cardiovascular function, hormone secretions, and involuntary muscular activity are only a few of the physiological indices of emotion which have been studied and reported(14). If a specific combination of such physiological changes acquires a stimulus role with respect to an emotional response as a consequence of learning, any treatment procedure which alters the function of the hypothalamic-autonomic-endocrine-extrapyramidal systems may be expected to result in stimulus conditions which are *different* from the specific configuration of internal stimuli which have acquired the properties of conditioned stimuli with respect to that response. Therefore, such treatments should reduce the strength of the previously learned emotional response along a gradient of stimulus generalization. This reduction in strength should apply to emotional responses in general, whether they are classed as "adaptive" or "pathological."

Most, if not all, of the somatic treatment procedures which have been successfully employed in psychiatry have known "side effects" which reflect changes in the function of the hypothalamic, autonomic, endocrine, and/or extrapyramidal systems. These include the various forms of shock therapy, psychosurgery, hydrotherapy, sleep therapies, and ataractic drugs such as chlorpromazine and reserpine. In addition, spontaneous improvement frequently has been reported following acute infections, surgical trauma, pregnancy and/or childbirth, physical mal-

treatment, and a variety of other physiological stresses which alter the homeostatic control systems cited above. If such physiological stresses are applied while the patient's behavior is restricted to a narrow range covered by a specific psychiatric diagnostic category, any deviation from pretreatment behavior patterns is quite likely to be interpreted as clinical improvement. However, if the behavioral baseline is more nearly normal, deviations are less likely to be interpreted as improvement and might well be interpreted as pathological. It is not surprising, therefore, that such treatments frequently have been blamed for precipitating "latent psychosis" when they have been administered to mildly neurotic or non-psychiatric patients(13). We might also note that marked temporary changes in behavior can be produced by somewhat toxic doses of such autonomic drugs as atropine, eserine, cholinesterase, epinephrine, and norepinephrine (1). Such behavior is interpreted as a "lucid interval" in psychotic patients (especially in mute catatonics in whom even the most bizarre verbal output is considered improvement), but it might be called pathological if it occurred in non-psychotic patients.

One could argue on the basis of the clinical examples cited above that the behavioral changes resulting from a variety of somatic treatments constitute no more than non-specific interference with whatever behavior patterns existed prior to treatment. Such an interpretation would be entirely consistent with the hypothesis elaborated above concerning the stimulus role of the internal environment. However, other writers have amply demonstrated that this is by no means the only interpretation which can be given to these data. Therefore, the present paper will concentrate on deriving specific, testable predictions from that general hypothesis. A few animal experiments which appear to have a bearing on these predictions will also be discussed.

Prediction 1. Any treatment procedure which changes internal stimulus conditions so that they are different from the stimuli which were associated with an emotional response during the learning process will reduce the strength of that emotional response along a gradient of stimulus generalization

This prediction is illustrated in Fig. 1, (a) and (b). If learning occurs with stimulus 0 as the conditioned stimulus, *any* change in that stimulus, either to the right or left on graph (a) will result in a reduction in response strength (ΔR). However, if some stimulus other than 0 is employed as the conditioned stimulus during the learning process, that new stimulus will acquire maximum response strength and presentation of stimulus 0 will now result in a reduction in response strength as illustrated in graph (b).

Experimental Evidence: Electroconvulsive shock treatment (ECT) results in sympathetic dominance of the autonomic nervous system in the rat(8). Brady and Hunt(6) have shown that ECT reduces the strength of a conditioned emotional response in the rat. The internal stimulus conditions resulting from such treatment might be represented as +3 in Fig. 1 (a). The hypotension, hypothermia, and other indices of parasympathetic dominance resulting from chlorpromazine and reserpine are essentially opposite to the effects of ECT and might be represented as -3 in that same graph. Yet these treatment procedures also reduce the strength of a conditioned emotional response(5, 9). In the above experiments, learning occurred under conditions of normal autonomic balance (prior to treatment), while testing for retention of the emotional response was conducted after autonomic balance had been altered in one way or another (along with other physiological changes). In a recent unpublished experiment, the writer has demonstrated that rats can acquire a conditioned emotional re-

sponse immediately after ECT while autonomic balance is different from normal. Although this emotional response is ordinarily retained for many months (even years) without apparent reduction in strength, the emotional response appeared to be completely absent in this experiment when retention tests were administered 30 days after the last training trial. Gellhorn's data(8) indicate that autonomic balance returns to approximately normal levels within 30 days after treatment with ECT (using blood sugar as an index of autonomic balance). This change *toward normal* in internal stimulus conditions is represented in Fig. 1 (b), and it was accompanied by a reduction in the strength of the emotional response in accordance with the prediction stated above.

Prediction II. A learned emotional response which has been weakened by stimulus changes will recover its original strength if stimulus conditions which prevailed during the learning process are reinstated.

Experimental Evidence: Since physiological recovery from ECT appears to occur within 30 days, we might expect on the basis of this prediction that a conditioned emotional response which has been attenuated by ECT should also recover its pretreatment strength within this period of time. Brady (3) has demonstrated that an emotional response which has been virtually eliminated by ECT reappears at approximately pretreatment strength within 30 days after treatment. Also, since ECT and chlorpromazine have somewhat antagonistic actions on autonomic balance, the physiological state resulting from a combination of such treatments might be expected to approach normal conditions of autonomic balance. The writer(9) recently demonstrated that a conditioned emotional response which had been weakened by ECT could be partially restored by administration of chlorpromazine.

Prediction III. Since extinction ("un-learning") requires nonreinforced presentations of the original conditioned stimulus, any change in internal stimulus conditions which is sufficient to interfere with retention of conditioned emotional responses should also interfere with extinction of those responses. If stimulus 0 is the original conditioned stimulus, as illustrated in Fig. 1 (c),

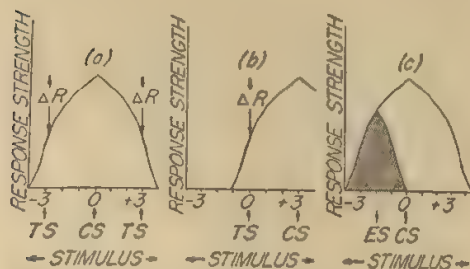


FIG. 1.—Theoretical gradients of stimulus generalization. CS-stimuli presented during conditioning; TS-stimuli presented on test trials; ES-stimuli presented (without reinforcement) on extinction trials. Shaded area in (c)=reduction in response strength due to extinction.

non-reinforced presentations of stimulus — 2 do not fulfill the requirements for extinction of an emotional response to the original conditioned stimulus.

Experimental Evidence: Although their mechanisms of action are quite different, both chlorpromazine and tetraethyl ammonium (TEA) result in gross changes in autonomic balance. Both of these drugs may interfere with retention of emotional responses (2, 4, 9), but the evidence is more clear that they both interfere greatly with extinction of conditioned emotional responses (7, 11).

On the other hand, Hunt and Brady (12) have shown that extinction procedures conducted during the period from 5 to 18 days after ECT can prevent the usual reappearance of a conditioned emotional response within 30 days after treatment. It should be noted, however, that physiological recovery was occurring while these extinction procedures were being carried out. Thus, internal stimulus conditions may have been greatly altered during the early extinction trials, but later trials were taking place while internal stimulus conditions were more similar to the status which prevailed during the learning of the emotional response.

Possible Clinical Applications: The preceding discussion suggests that the symptomatic relief (failure to retain pretreatment emotional behavior patterns) resulting from somatic treatment procedures does not constitute a permanent change in behavior. Indeed, this is a very common criticism leveled against the somatic treatment procedures used in psychiatry. This discussion even suggests that such treatments may interfere with the process of extinction ("unlearning") which might be expected to result in more permanent changes in behavior. However, the writer readily admits that the maladaptive emotional behavior seen in psychiatric patients is infinitely more complex than the simple conditioned emotional responses which have been subjected to experimental manipulations in the animal experiments cited above. But this admission of greater complexity does not constitute a denial of similar basic processes underlying both simple conditioned emotional response in experimental animals and pathological emotional behavior in psychiatric patients. Emo-

tional behavior appears to be learnable and extinguishable in the human as well as in the rat if we can gain control over the relevant stimuli and reinforcements (rewards).

One of the complicating factors in any attempt to manipulate learned emotional behavior is the appearance of subtle rewards which may maintain such behavior long after the rewards which were operative in the original learning situation are withheld. For example, cleanliness is regularly rewarded by social approval, but compulsive hand-washing, an extreme expression of this same response pattern, may persist despite social disapproval. However, the persistence of this pathological behavior cannot be cited as a violation of the basic, lawful processes which govern learning and retention. Indeed, such behavior seems to be strongly rewarded by reduction of anxiety, guilt, etc. Extinction of these pathological response patterns cannot be expected to occur unless some way can be found to control these response-produced rewards which the patient derives from his symptoms. Figure 2 illustrates a possible mechanism by which somatic treatment procedures may assist in gaining some degree of control over the rewards which appear to reinforce certain pathological behavior patterns as well as over the stimuli which elicit those symptoms.

Compulsive hand-washing, which is used for illustrative purposes in Fig. 2, is typical of psychiatric symptoms in that it is a complex, sequential response pattern rather than a unitary, all-or-none phenomenon. This

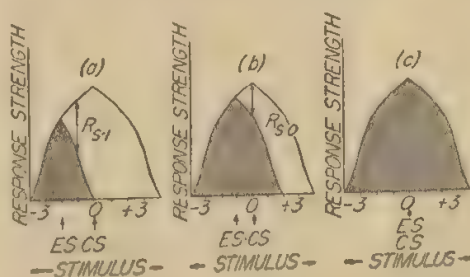


FIG. 2.—Theoretical response curves during successive stages of extinction of a reward-producing symptom (compulsive hand-washing). The stimulus which is presented during extinction trials (ES) progresses from a stimulus very different from the conditioned stimulus (CS) to identical with the CS. Amount of extinction (reduction in response strength) is presented by the shaded areas.

symptom may include such response components as feelings of guilt and/or anxiety, thoughts about hand-washing, preparatory motor responses, and finally the overt response of washing the hands followed by temporary relief from the disturbing emotional state. If the stimulus conditions which elicit this response sequence include an internal stimulus component, somatic treatments which change the internal environment might be expected to weaken or attenuate this response pattern along a gradient of stimulus generalization, as illustrated in Fig. 2 (a). If this attenuated version of the symptom does not include the final motor response of washing the hands, no anxiety or guilt reduction would be expected to follow such a partial response. The absence of such rewards removes one of the most serious obstacles to extinction, but, at the same time, creates two additional obstacles which interfere with the process of extinction to a limited extent.

The process of extinction apparently requires 1. the occurrence of the appropriate stimulus, 2. the occurrence of the response, and 3. the non-occurrence of reinforcement, such as rewards, pain reduction, anxiety reduction, etc. In the behavioral situation illustrated in Fig. 2 (a), the third requirement listed above may be met, since reinforcement apparently depends upon performance of the complete symptomatic response pattern; however, the first two requirements are only partially fulfilled. The stimulus and response which are involved in this stage of the extinction procedure are similar to, but not identical with, the original stimulus and response. Such a procedure can reduce the strength of the original stimulus-response relationship only on the basis of stimulus and response generalization. Hilgard and Marquis (10) have summarized some of the evidence which indicates that extinction can occur along a gradient of stimulus generalization, but the writer is not aware of any direct evidence for response generalization during the process of extinction. However, it seems reasonable to expect that extinction of one or more parts of a response sequence would result in some diminution in the strength of the total response pattern.

If both stimulus and response generaliza-

tion occur during extinction, the procedure represented in Fig. 2 (a) would result in a considerable reduction in the strength of response to stimulus -1, as well as complete elimination of response strength to stimulus -2. Following this stage of extinction, stimulus conditions can be made more similar to the original conditioned stimulus without eliciting the complete symptomatic response (with its consequent rewards), as illustrated in the next graph. If extinction procedures are then conducted using stimulus -1 as the extinction stimulus, even the strength of response to the original conditioned stimulus will be attenuated on the basis of stimulus and response generalization. If this reduction in response strength to the original stimulus is sufficient to interrupt the symptom pattern at some point before it leads to its usual rewarding consequences, the original stimulus can finally be presented and extinction procedures carried out as shown in Fig. 2 (c). Thus, even though a change in stimulus conditions appears to interfere with the effect of ordinary extinction procedures, such stimulus changes may permit the more gradual extinction of "self-rewarding" responses (symptoms) which are not amenable to ordinary extinction procedures. If such extinction occurs, new responses can be learned over the entire stimulus range by combining emotional re-education procedures (psychotherapy?) with the extinction procedures.

Wolpe (15) has recently reported successful therapy for human and animal neurosis by a combination of extinction and new learning procedures beginning with greatly altered conditions of the external environment and gradually progressing toward the stimulus conditions which had previously elicited maximum strength of the neurotic responses. On the theoretical grounds discussed above, one might expect more uniform success in such therapeutic attempts if both the internal and the external stimulus conditions were altered simultaneously by a combination of somatic and environmental therapy to give immediate symptomatic relief. Then both the internal and external environment could be allowed to return gradually toward the conditions which prevailed prior to treatment while intensive psychotherapy provided the

conditions necessary for extinction of the maladaptive emotional responses and substitution, through new learning, of more adaptive emotional response patterns along the entire range of internal and external stimuli.

If this analysis is correct, it may be of crucial importance to alter the internal and/or external stimulus conditions suddenly rather than gradually at the beginning of therapy. If treatment is begun with slight changes in stimulus conditions, we may expect very little reduction in symptomatic behavior. Unless this symptomatic behavior is at least temporarily relieved (by a sufficiently large stimulus change) it will continue to be reinforced by guilt and anxiety reduction, etc., and such reinforcements will result in learning to perform this symptomatic behavior under the *new* stimulus conditions as well as the old. In this way, gradual changes in internal or external stimulus conditions may have no therapeutic effects and may actually result in a broader range of stimuli which will elicit the pathological behavior. For example, hospitalization, by itself, may not constitute a sufficient stimulus change to interfere with a compulsive hand-washing symptom. Therefore, this pathological behavior pattern will continue to be performed in the hospital, just as it was prior to hospitalization. The subtle rewards associated with this symptom may then be expected to reinforce the response to the new external stimulus conditions as well as to the old stimuli. After this learning has occurred, the addition of a somatic treatment such as chlorpromazine may also involve a stimulus change which is not sufficient, by itself, to prevent occurrence of the self-rewarding symptom. Again, the result may be new learning which would result in the symptom becoming associated with a broader range of internal stimuli. However, if both the internal and external stimulus conditions were altered by simultaneous institutionalization and somatic therapy, the resultant combined stimulus changes might be great enough to interfere with performance of the self-rewarding symptom and permit gradual extinction of the response pattern while stimulus conditions are gradually returned toward their pretreatment status.

SUMMARY

1. The view was expressed that behavioral effects of somatic treatment must occur within the context of lawful stimulus-response relationships.

2. The hypothesis was suggested that certain changes in the internal environment are included in the stimulus conditions which elicit emotional response and that somatic treatment procedures may change emotional behavior *by changing the stimuli which elicit emotional responses*.

3. Specific, testable predictions were derived from this theoretical point of view, and a limited number of animal experiments were discussed in relation to these predictions.

4. Possible practical applications of this point of view were suggested and discussed.

BIBLIOGRAPHY

1. Abramson, H. A. (Ed.): *Neuropharmacology: Transactions of the Second Conference*, New York: Josiah Macy Foundation, 1956.
2. Auld, F., Jr.: *J. Comp. Physiol. Psychol.*, **44**: 565, Dec. 1951.
3. Brady, J. V.: *J. Comp. Physiol. Psychol.*, **44**: 507, Oct. 1951.
4. Brady, J. V.: *J. Comp. Physiol. Psychol.*, **46**: 307, Aug. 1953.
5. Brady, J. V.: *Ann. N. Y. Acad. Sci.*, **64**: 632, Nov. 1956.
6. Brady, J. V., and Hunt, H. F.: *J. Comp. Physiol. Psychol.*, **44**: 204, Apr. 1951.
7. Davitz, J. R.: *J. Comp. Physiol. Psychol.*, **46**: 311, Aug. 1953.
8. Gellhorn, E.: *Physiological Basis of Neurology and Psychiatry*, Minneapolis: University of Minnesota Press, 1953.
9. Heistad, G. T.: *J. Comp. Physiol. Psychol.* In press, 1957.
10. Hilgard, E. R., and Marquis, D. G.: *Conditioning and Learning*, New York: Appleton-century, 1940.
11. Hunt, H. F.: *Ann. N. Y. Acad. Sci.*, **65**: 258, Nov. 1956.
12. Hunt, H. F., Jernberg, P., and Brady, J. V.: *J. Comp. Physiol. Psychol.*, **45**: 589, Dec. 1952.
13. Kalinowski, L. B., and Hoch, P. H.: *Shock Treatments and Other Somatic Treatments in Psychiatry*. New York: Grune and Stratton, 1952.
14. Stevens, S. S. (Ed.): *Handbook of Experimental Psychology*, New York, Wiley, 1951.
15. Wolpe, J.: *Leech*, **25**: No. 4, p. 1.

A METHOD FOR STUDYING THE ORGANIZATION OF TIME EXPERIENCE

JOHN S. KAFKA, M.D.^{1, 2}

Current focus on "ego-psychology" has revived psychiatric interest in all perceptual processes, including time perception(7, 9), although psychiatrists, of course, have long been concerned with problems of attitude toward time and of temporal orientation(13). The topic of temporal orientation is also of considerable interest in connection with the experimental work being done by Hebb and his co-workers(5), Lilly(8), and others on the psychological effects of prolonged isolation in a setting in which stimulation level is greatly reduced. Many aspects of the psychiatric interest in temporal experience have been reviewed previously(3, 6). It is generally accepted that the subjective rate of temporal flow is not constant, that time passes faster under some circumstances than under others. By whatever mechanisms temporal orientation is maintained, a constantly changing series of different, even contradictory experiences of duration must somehow be reconciled with objective time. We *know*, for instance that our interest in a task, and our mood, influence our experience of duration. We take these and other factors into consideration when we are called upon to estimate durations. It is also possible that a self-evaluative component, directly or in-

directly involved in time perception, is one of the "ego functions" necessary to avoid the feelings of temporal unreality which are encountered clinically.

The following experimental approach represents an effort to study the process of evaluating and organizing one's experiences of duration: 1. after having been in a series of situations in which attention was not directed toward the passage of time, 2. in which external cues of time were minimal and 3. in which experiential cues of duration were confusing.

PROCEDURE

The experimental procedure was structured for the subjects as an experiment in the perception of the movements of a small light in a dark room. The auto-kinetic effect was employed for this purpose, that is, the subjective appearance of movement of a pin-point stationary light in a dark room. One group of subjects was told in the first part of the experiment that the light would move in a random fashion. In the second part of the experiment this group was told that the light would now describe letters and sentences(5). This first sequence of instructions will be referred to as Instruction Sequence A. For the other half of our subjects the sequence of instructions was reversed. This sequence will be referred to as Instruction Sequence B.

Both sets of instructions² included a statement to the effect that the subject's eyes would first have to accommodate to the dark-

¹From the department of psychiatry, Yale University School of Medicine, U. S. Public Health fellow. This research was supported in part by a grant from the Social Research Foundation, Inc. Address: Chestnut Lodge Research Inst., Rockville, Md.

²Appreciation is expressed to F. C. Redlich, M.D., chairman of the department of psychiatry, Yale University School of Medicine, who read the manuscript and authorized use of facilities and equipment. George F. Mahl, Ph.D. contributed many valuable suggestions. Dean Pruitt, Ph.D., made the statistical computations and suggested some statistical techniques. Mrs. Margaret Toohey helped in the testing procedure. Wm. D. Neff, Ph.D., Dept. of Psych., Univ. of Chicago, and Philip K. Bondy, M.D., Dept. of Internal Med., Yale Univ. School of Med. have encouraged my work and called some pertinent problems to my attention. The author wishes to express his gratitude to the above and to the volunteer subjects.

³To illustrate, Part I of Instruction Sequence A reads as follows: The test we would like to do involves your observation of the movements of a light in a dark room. We have a microphone in the dark room so that I can hear you from the outside. First we would like your eyes to get accustomed to the darkness. Then a light will appear and I will show you in what direction you should keep looking for the light. Say "light on" when you first see the light. Say "now it moves" when you first suspect that it moves, even if you're not sure. Then describe how it moves.

ness. We were able in this way to get a total of 4 intervals for each subject. Thus we have conditions Dark I, Light I, Dark II, and Light II for subjects who received instructions A and B. These conditions will be referred to as: AD I, AL I, AD II, AL II, BD I, etc. Immediately after each subject had experienced all 4 conditions he was asked to estimate the duration of the intervals, which, actually, lasted 2 minutes each. The entire procedure was recorded on tape so that qualitative as well as quantitative analysis of the data was possible. The subjects were also asked to describe how they went about estimating the intervals.

The experimental population consisted of 16 volunteers, including 14 women and 2 men. Eleven were hospital employees; 2 were medical clinic patients; one a medical student; one a physician and one a graduate student.

METHODOLOGICAL CONSIDERATIONS AND HYPOTHESES

It will be noticed that the subjects were asked to estimate the intervals *after* having been in all 4 of the experimental situations. At the time of judgment, therefore, more time had elapsed since the earlier than since the later intervals, an unavoidable methodological difficulty since it was considered important that the subjects' attention should not be called to the passage of time. It was, however, anticipated that subjects would select one of the 4 intervals as a reference point for estimating the others, that this "reference interval" would not necessarily be the first one of the individual series⁴ and that, therefore, the time elapsed from reference interval to moment of judgment would not be the same for all subjects. The verbal reports of some subjects actually indicated that they used an interval other than the first as a reference interval. (See, however, footnote 10.)

In experiments on time perception and temporal orientation, experiments in which the subjects' attention was directed to the passage of time, an improvement of time judgments has been described as the series

progressed, *i.e.*, later judgments were more accurate than earlier ones (3, 10). Although our subjects' attention was not thus focused on time, we nevertheless expected that (*Hypothesis I*) *there will be, for conditions D and L considered separately, a tendency to improve, i.e., to estimate the last more accurately than the first interval.*

In order to study the process of arriving at temporal judgments after having been exposed to confusing experiential cues of duration, it was necessary to demonstrate the extent of temporal distortion that could be produced by some of the "confusing" cues. Subjective experience, confirmed by experimental literature (3), shows that paucity of stimuli is associated with relatively long judgments of duration; it was therefore expected that (*Hypothesis II*) *intervals D will be judged as longer than intervals L.*

It was also anticipated that the time estimates would be determined less by any serial improvement effect (referred to in *Hypothesis I*) than by the effect of the relative paucity of stimuli (referred to in *Hypothesis II*); in other words: (*Hypothesis III*) *whether an interval occurs early or late in the individual series will influence its judged duration less than whether it occurs under condition D or L.*

The suggestion that in one of the 4 experimental situations the "light will describe letters, words and sentences" was given to introduce another set of confusing experiential cues of duration. Rechtschaffen, *et al.* (11) have used the autokinetic situation as a projective technique by giving similar instructions. Apparently all their subjects saw "writing," some subjects even whole paragraphs of emotionally significant material. It was necessary to modify their technique for our purposes,⁵ but it was thought that, if a sufficient number of subjects were to see, with this modified procedure, letters, words and sentences, the data could then be at least tentatively evaluated with the following considerations and questions in mind:

⁵ Some differences: our auto-kinetic situation, in contrast to Rechtschaffen's was preceded by a waiting period in the dark; our subjects were alone in the experimental situation whereas the experimenter stayed with Rechtschaffen's subjects and apparently kept encouraging them to see "writing."

⁴ Even if first asked to judge the initial interval.

In such a projective situation the wealth and nature of the production obviously depends on the subject's elaboration of the percept; in a sense the subject determines his own stimulation. With such an increase in stimulation, will elaborate and/or emotionally significant projective productions be associated with shorter estimates, with more difficulty in the self-evaluation of time experience? What are the effects on temporal judgments of successful or unsuccessful attempts to see auto-kinetic "writing" and what are the effects of psychologically defensive maneuvers, of successful or unsuccessful attempts to avoid seeing or of seeing only emotionally "neutral" material?

The above questions are pertinent if our procedure effectively provides a projective situation. If it does not, the question remains as to if and how the *expectation* to see "writing" alters temporal judgments.

A surprisingly wide range of inter-individual differences as well as considerable intra-individual constancy of time perception

has frequently been demonstrated (3).⁶ In this experiment the individuality of each subject's *pattern*⁷ of time judgment and the relative constancy, for each individual, of the predictable effect of specific sets of stimuli (or of paucity of stimuli), will be shown if (*Hypothesis IV*) *the decrease of time estimates from conditions D to L differs significantly between subjects.*

RESULTS AND TREATMENT OF DATA

Table I gives all the estimates in seconds. Attention is called to the wide range of time judgments made: the estimates of the 2 minute intervals range from 20 to 480 seconds. There was a general tendency to overestimate, the means for all conditions

⁶ Although subjects also vary greatly in the degree of stability of their time judgments (3).

⁷ An individual pattern being a tendency to consistently either over or underestimate in either the "dark" or the "light" situation and to consistently change time estimates from the "dark" to the "light" situation in an individually characteristic way.

TABLE 1

Subject	AD I	"Random movement" *		AD II	"Letters" *		Total of estimated elapsed time for subject	Total of actual elapsed time for subject
		AL I			AL II			
1	120	90		60	90		360	480
2	120	60		120	40		340	480
3	120	60		90	30		300	480
4	53	60		53	120		286	480
5	180	160		180	100		620	480
6	180	180		90	60		510	480
7	480	300		480	240		1500	480
8	300	180		300	180		960	480
Total	1553	1090		1373	860		4876	3840

Subject	BD I	"Letters" *		BD II	"Random movement" *		Total of estimated elapsed time for subject	Total of actual elapsed time for subject
		BL I			BL II			
9	60	30		40	20		150	480
10	420	300		300	180		1200	480
11	120	30		120	30		300	480
12	180	300		180	270		930	480
13	300	150		420	90		960	480
14	420	300		480	180		1380	480
15	300	300		480	300		1380	480
16	180	120		180	120		600	480
Total	1980	1530		2200	1190		6900	3840

A—Instruction Sequence A

B—Instruction Sequence B

D—Darkness

L—Auto-Kinetic light on

* See text for explanation.

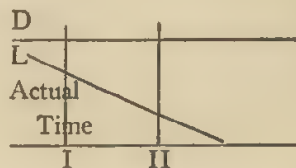
but AL II being greater than the actual 120 seconds. By inspection the tendency to overestimate appears greater for the subjects estimating in Instruction Sequence B.

Statistical analysis was designed to test the significance of individual differences, the effects of Instruction Sequence A vs. B, of condition D vs. L, and of I vs. II, *i.e.*, the effects of the condition occurring early or late in the individual series. The analysis of variance, done for estimates under conditions A and B separately as well as for both conditions combined, all showed that estimates made under "dark" were significantly ($p < .01$) longer than those made under "light" conditions. Differences between individuals were also significant beyond the 1% level of confidence, but the analysis of the combined data showed that the effect of A vs. B was not significant and in all 3 analyses the effect of serial position (I vs. II) failed to reach statistical significance. No significant interaction effects were demonstrated. Hypothesis I, as originally stated, was thus not supported.

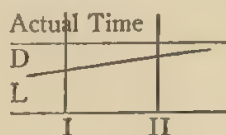
Because of the overall tendency to overestimate, a trend toward shorter estimates was generally an "improvement." For the A instructions the first dark estimates were somewhat greater than the second, the first light estimates greater than the second, but the differences did not quite reach statistical significance. For the B instructions the first dark estimates were somewhat smaller than the second (here a trend toward less accuracy) but the difference was again not significant. Only the second light estimates of the B instructions were significantly ($p < .05$) more accurate, *i.e.*, shorter. For instruction sets A and B combined there was a significant decrease, or improvement, from L I to L II ($p < .01$), but also a slight, statistically insignificant increase from D I to D II.

Although the data did not support hypothesis I, as stated, another attempt was made to demonstrate a tendency to improve in the individual series. Qualitative observations of the verbalized process by which some subjects arrived at time judgments⁸

suggested the possibility that overestimators⁹ sometimes attempted to use the 2 dark intervals, and some underestimators¹⁰ the 2 "light" intervals as one experiential reference unit.¹⁰ If an overestimator tends to make approximately the same estimates for his first and second "dark" situation, but improves (*i.e.*, overestimates progressively less) from his first to second "light" situation, the D-L difference should increase from I to II. Such a statistically significant increase of the D-L difference can actually be demonstrated for the overestimators. Schematically this situation can be shown as:



If the same reasoning is applied to the underestimators, the schema would be:



but in our experiment the D-L difference does not change significantly from I to II for the underestimators.

Table II pools the time estimates for Instruction Sequence A and B, but separates the overestimators' from the underestimators' judgments. For the underestimators the difference between Light and Dark estimates is greater for the first pair of observations (UD I-UL I) than for the second pair. This difference, however, is not significant. For the overestimators, on the other hand, there is a marked tendency for the difference between the second Light and Dark estimates (OD II-OL II) to be greater than that be-

⁹ See definition in Table II.

¹⁰ The importance of the initial experience as "reference" has, however, been stressed in other kinds of time perception experiments. It is possible that, despite the verbally expressed use of the "light" intervals as reference units, our subjects could never free themselves from the frame of reference effect of the "dark" intervals to which they were all exposed at the beginning of the experiment.

⁸ And also the significant L I-L II difference in condition B in which there is much overestimation.

TABLE 2

Underestimators *

Subject	UDI	ULI	UD II	UL II	Total for subject
1A	120	90	60	90	360
2A	120	60	120	40	340
3A	120	60	90	30	300
4A	53	60	53	120	286
9B	60	30	40	20	150
11B	120	30	120	30	300
Total .	593	330	483	330	1736

Overestimators *

Subject	OD I	OLI	OD II	OL II	Total for subject
5A	180	160	180	100	620
6A	180	180	90	60	510
7A	480	300	480	240	1500
8A	300	180	300	180	960
10B	420	300	300	180	1200
12B	180	300	180	270	930
13B	300	150	420	90	960
14B	420	300	480	180	1380
15B	300	300	480	300	1080
16B	180	120	180	120	600
Total .	2940	2290	3090	1720	9740

* A subject is defined as an underestimator if the sum of his estimates is smaller than the sum of the clocked intervals. An overestimator is one whose sum of estimates exceeds the sum of the clocked intervals.

tween the first pair of estimates (OD I-OL I), and this difference is significant ($p < .02$).¹¹

Hypothesis II was supported by statistical analysis. The 3 analyses of variance, referred to at the beginning of this section, analyses done for Instruction Sequences A and B separately and combined, all show that intervals D are judged significantly longer than L ($p < .01$).

Hypothesis III was also supported by the results. The sum of the Dark-Light differences (AD I-AL I) + (AD II-AL II) was compared to the sum of the Dark I-Dark II plus Light I-Light II differences (AD I-AD II) + (AL I-AL II). A similar procedure was done both for Instruction Sequences A and B combined and treated separately. The Dark-Light differences were always greater than the I-II differences; to a statistically significant degree ($p < .05$) this was true for

condition B separately and for conditions A and B combined. The trend failed to reach statistical significance for condition A alone.

The data also supported Hypothesis IV. This was shown by an analysis of variance of the Dark-Light differences, a procedure that will again be referred to below. The variance between individuals of these Dark-Light differences was significant beyond the one percent level of probability.

As was mentioned at the beginning of this section, analysis of variance of all the estimates showed that there was no statistically significant effect of Instruction Sequence A vs. B. The following considerations are however, pertinent:

Although Lovett(9), in a very different kind of time perception experiment, found age and occupation not to be significant factors, it must be pointed out that in our experiment, subjects in Instruction Sequence A were not matched with those in B for these and other factors, such as intelligence, which might conceivably influence time judgments in our experimental situation.

Despite the instruction that they would see "letters, words, sentences," only 3 (2 in the A group, one in the B group) of the 16 subjects saw any letters at all and no one saw more than 2 letters. Neither these nor the few subjects in both groups who even commented in passing that they looked for, but did not see letters, were extreme over- or under-estimators. Berman(1) has shown that "satiated" subjects, i.e., those who felt they had spent enough time to learn a task, usually underestimated the time required, and that the opposite was true for subjects interrupted before they felt that they had learned the task. Qualitatively, none of the subjects showed a great lack of this kind of "satiation," i.e., none seemed particularly concerned about not having succeeded or not having finished the task of seeing "letters, words, sentences." Quantitative results confirmed the impression that a "satiation effect" did not play a part in our findings.

The possible effect on time judgment pattern of instructions to see "letters . . ." vs. instructions to see "random movement" was examined quantitatively by analysis of variance of the Dark-Light difference scores.

¹¹ Overestimators are more prevalent in B than in A. The change in the D-L difference from I to II, however, is not statistically different in groups B and A.

Considering only the differences between estimates under Dark and those under Light conditions, the D-L differences were found to be greater under "random movement" than under "letter" instructions, but the difference did not reach statistical significance. This analysis of variance also showed that there was no significant serial effect in the D-L difference scores, *i.e.*, the D-L scores were greater in the second half of the sessions than in the first. The individual differences in the D-L scores, as mentioned in connection with Hypothesis IV, were, however, significant beyond the one percent level of confidence.

The following qualitative observations were made: most subjects indicated: 1. how difficult it was to make the time estimates and how uncertain they were of their judgments; 2. almost all indicated that they would undoubtedly have been able to make more accurate judgments "if only they had been told" beforehand that they would be asked to make such estimates. Some were quite angry that they had not been initially informed of this task.

The actual process of arriving at judgments of duration then seemed to be as follows: most subjects reviewed their experiences in the 4 experimental situations, many then gave some indication that they selected either one or both "Dark," or one or both "Light" intervals as reference experiences, before selecting an interval about which they made an actual judgment of duration. Because of this shifting, the following statement is very tentative, but, as has been mentioned previously, there was a tendency for underestimators to fixate more on "light," and overestimators more on "dark" intervals as reference units. The most difficult task almost always seemed to be the initial estimate. The other intervals were then usually estimated in relation to the one that had been selected as the reference interval (with a phrase such as "a little more than half as long," etc.). Most subjects expressed much more confidence in such relative judgments than in the absolute figures.

The process of self-evaluation of the experience of duration was often verbalized spontaneously or could easily be elicited by

inquiry. When it was expressed spontaneously, this usually occurred before the subject had made an estimate expressed in figures. Occasionally, however, a spontaneous self-evaluation led to the correction of an already numerically expressed judgment, and in such instances the estimate which the subject *finally* considered "best" was recorded. Self-evaluation of the time experience was usually related to a distortion of subjective duration which had been experienced on previous occasions. A representative quote will best demonstrate the process:

I would imagine that my guesses are about twice what they should be, or twice the time." (Experimenter): "What makes you say that?" (Subject): "Because I'm sure that I'm just . . . I'm fairly accurate usually on passage of time, and I . . . when it's . . . I dunno. It's something about the dark in the night time. It . . . time seems like it's going faster than it really is.

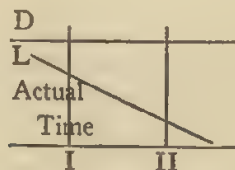
Deviations from the usual pattern sometimes apparently resulted from an overcorrection in a situation that seemed particularly anxiety provoking. A subject who estimated a Light period longer than a Dark one commented that the Dark interval "really seemed to last an eternity," volunteered that she thought about how terrible blindness must be and how interminable sleepless hours are at night.

DISCUSSION

We have seen that the performance of our subjects was characterized by 2 features: 1. there were marked efforts at self-evaluation of the time experience, but 2. these efforts were not entirely successful and the final judgments of duration were "stimulus bound" in the sense that there was a predictable pattern of longer judgments for the "Dark" than for the "Light" intervals. Judging duration, under the conditions described, was felt to be a difficult task involving self-evaluation of the experience of duration.

Since the ability to assess one's own time experience may well be an ego-function necessary to avoid temporal estrangement, if not temporal disorientation, the experimental approach described may be useful in detecting and studying disturbance of an important ego function. We have seen that for the

overestimators the difference between the second "Light" and "Dark" estimates was greater than that for the first pair of estimates, a situation illustrated by the following schema:



If this kind of finding were supported by further experimental work, it would suggest that, even beyond the level of verbalized self-evaluation, (and probably below the level of consciousness) individuals may have some "knowledge," for instance, that they are overestimating. It would then be interesting to see if, and to what extent, there is evidence for such self-evaluative "knowledge" in various pathological conditions, including the experimental psychoses.

Concerning the longer estimates made of the "Dark" intervals, it would be interesting to see if, in some psychopathological conditions, paucity of stimulation remains associated with longer judgments. The prediction of the time judgment pattern in our experiment was based essentially on the relative amounts of external stimulation. But what happens to such predicted patterns in psychopathological conditions in which intrusion of intense and continuously fluctuating psychic material may obscure the "objective" characteristics of external reality? Freud's belief that temporal experience is related to the rate of discharge of cathexis(4) is pertinent here, and so is Lilly's(8) observation of a kind of "absence" of subjective time associated with a period of minimum stimulation, a period in which the subject is suspended in a tank filled with water at body temperature. He describes how, after such an "isolation experiment,"¹² "the day apparently is started over, i.e., the subject feels as if he has just arisen from bed afresh; this effect persists, and the subject finds he is out of step with the clock for the rest of the day." Lilly describes various "stages"

of the experimentally isolated subject who finally arrives at a stage in which hallucinations occur. Since, in his rather sharply delineated "stages," there is presumably a shift from secondary to primary processes (in the psychoanalytic sense), a study comparing subjective estimates with the clocked duration of these stages would be of great interest.

The question arises if the tendency to be an extreme over- or underestimator can be correlated with any personality characteristics. Our observations do not provide an answer, but they do suggest the following approach to this problem: some qualitative observations led to the belief that the overestimators tended to "fixate" more on the "Dark" and the underestimators tried to fixate more on the "Light" intervals as reference experiences. In projective techniques we believe that personality characteristics determine which features are seen as most prominent, are "fixated" on, and in time perception it may be that personality characteristics determine the selection of reference units which in turn strongly influence the judgment of other intervals. To present this idea in schematized form: just as a depressed subject may tend to emphasize black color in his Rorschach responses, he may also tend to select "Dark" or "Empty" intervals as reference units for temporal experience—a selection leading to long judgments of duration generally.

We have been primarily concerned so far with theoretical issues and possible psychodiagnostic application of our methodological approach. The simple fact, however, that "involvement" with a task shortens subjective duration suggests possible practical applications¹⁴ ranging from vocational interest testing to assessing the entertainment value of television programs. The latter application, however, also touches upon an intriguing theoretical issue. The problem of time perception in humorous situations is of considerable theoretical interest in the frame-

¹² In a sense, our experiment can be considered a very benign form of an isolation experiment.

¹⁴ Traditional industrial "time study" investigates the speed of performance of a task. In the age of automation, when wakefulness of the worker and boredom are increasingly significant problems, there may be room for a different kind of time study, investigating how a task can be arranged to make time pass rapidly.

work of psychoanalytic theory, since temporal experience has been related to the rate of discharge of cathexis(2, 4) and (12) enjoyment of humor has frequently been related to release of instinctual drive, to a sudden and massive discharge of accumulated cathexis.

There are, of course, many ways of varying the confusing experiential cues of rate of temporal flow, and many ways of reducing stimulation. The experiment presented is merely a small scale presentation of a method, which may not only have some practical applications, but which may be useful in the study of some basic problems in psychopathology.

SUMMARY

A method for studying the process of self-evaluation and organization of time experience is described. It utilizes an experimental situation in which the subject is not aware of the experimenter's interest in time perception, in which external cues are minimal and "experiential" cues are confusing. Intervals in the dark are judged as longer than intervals during which the subject is in the presence of an "auto-kinetic" light. There are significant individual differences in the pattern of temporal organization. Ways in

which subjects approach the experimental task are described qualitatively. Theoretical and practical implications, including implications for the study of psychopathological phenomena, and possible extensions and variations of the method are discussed.

BIBLIOGRAPHY

1. Berman, A. J. *Exp. Psychol.*, 25: 281, 1939.
2. Bonaparte, Marie. *Internat. J. Psychoanal.*, 21: 427, 1940.
3. Eson, M. D., and Kafka, J. S. *J. Gen. Psychol.*, 46: 169, 1952.
4. Freud, Sigmund. *Internat. J. Psychoanal.*, 21: 469, 1940.
5. Heron, W., W. H. Bexton, and D. O. Hebb. *Am. Psychol.*, 8: 366, 1953.
6. Kafka, J. S., and Bolgar, H. *Rorsch. Res. Exch. & J. Proj. Tech.*, 13: 341, 1949.
7. Lhamon, W. T., and Goldstone, S. *Arch. Neurol. & Psychiat.*, 76: 625, 1956.
8. Lilly, J. C. Symposium No. 2 of the Group for the Advancement of Psychiatry, Publications Office, 1790 Broadway, New York, June, 1956.
9. Lovett Doust, J. W. *Dis. Nerv. Syst.*, 16: 363, 1955.
10. MacLeod, R. B., and Roff, M. F. *Acta Psychol.*, 1: 381, 1935.
11. Rechtschaffen, A., and Mednick, S. A. *J. Abn. & Soc. Psychol.*, 51: 346, Sept., 1955.
12. Redlich, F., Levine, J., and Sohler, T. *Am. J. Orthopsy.*, 21: 717, 1951.
13. Spiegel, E. A., Wycis, H. T., Orchinik, C., and Freed, H. *Am. J. Psychiat.*, 113: 97, 1956.

CLINICAL NOTES

A CLINICAL APPRAISAL OF TRILAFON

FRANK J. AYD, JR., M.D.¹

Trilafon or perphenazine, a phenothiazine derivative, is a new tranquilizer which is rapidly effective with a minimum of side effects. Because of its potency and rapid absorption small doses are usually therapeutic. Consequently, the physiologic and neurologic responses to it are minimal, thus avoiding side effects which might complicate treatment.

Trilafon was administered to 300 neurotic and psychotic patients (ages 16-80) who were classified: schizophrenic reactions—paranoid 92, catatonic 8, unclassified 14, schizo-affective 27, pseudo-neurotic 5, simple 20; manic-depressive reactions—depressed 8, manic 16, hypomanic 4; involutional agitated depression 31; tension-depression 15; senile psychosis 25. Patients were selected for treatment because anxiety, agitation, or psychomotor excitement was the predominant symptom of their illness. The majority were treated on an ambulatory basis, but some initially were treated in a general hospital or a psychiatric institution.

The initial daily dose for mild and moderately disturbed patients was 2 mg. 4 times a day or 4 mg. twice daily. This was increased by increments of 2 mg. or 4 mg. until the therapeutic level was reached. The most effective therapeutic dose for this type of patient was 8 mg. to 24 mg. a day. The patient was maintained on this schedule from 2 weeks to several months and then Trilafon was discontinued gradually. The duration of treatment varied from 1 to 10 months, the average being 3 months. If symptoms recurred the previous therapeutic dose was re-administered and in some cases larger doses had to be prescribed.

Acutely disturbed patients were given oral Trilafon, 8 mg. to 16 mg. 2 or 4 times a day. The maximum dose seldom exceeded 100 mg. daily although as much as 200 mg. was needed in the rare patient. When parenteral medication was employed the dosage was 5 mg. to 10 mg. every 4 to 6 hours. After 3

or 4 painless intramuscular injections oral medication was started.

Whenever insomnia was severe, barbiturates were prescribed along with Trilafon. This therapy was practical and safe because Trilafon does not potentiate hypnotics.

The more pronounced the emotional distress, the more striking was the effect of Trilafon. There was marked to moderate improvement in 216 patients while 84 remained unimproved. Chronic neurotics and psychotics who had little overt anxiety and were complacent rather than disturbed derived little or no benefit from Trilafon. The most dramatic improvement was observed in acutely ill patients in whom emotional turbulence and disturbed behavior were replaced by placidity. Comparable therapeutic results were observed in the neurotic and mildly disturbed psychotic patients, but in these individuals behavioral changes were less prominent. Depressed patients were not helped. If the depression was accompanied by anxiety or agitation this drug relieved these symptoms. A combination of Trilafon and electroconvulsive therapy was safe and effective. Over 500 combined treatments have been administered and apnea, hypotension, cardiac irregularity or other adverse reactions have not been observed.

This drug did not cause jaundice, agranulocytosis or any type of dermatological reaction. In doses of 8 mg. to 16 mg. daily Trilafon may produce dryness of the mouth, miosis, weakness and fatigue, aching arms and legs, constipation and increased dreams. Larger doses, 24 mg. to 48 mg. daily, intensify these reactions and also may cause epigastric distress, nausea, dizziness, and infrequently tachycardia. These remit with reduction of the dosage. Hypotensive reactions, temperature variations, diarrhea, enuresis, nasal congestion, depression, depersonalization or other psychic reactions were not seen.

Trilafon may cause motor restlessness and parkinsonian manifestations. Parenteral Trilafon induces these rapidly and may cause

¹ Address: 6231 York Road, Baltimore 12, Md.

brief attacks of torticollis, retrocollis, and dystonic symptoms. Extrapyrarnidal symptoms are related to the dose and duration of treatment and are most common in doses over 20 mg. daily but can occur with lower doses. A reduction of the dose or an antiparkinsonism drug (Cogentin) relieves or abolishes these drug induced extrapyramidal symptoms so that it is unnecessary to stop Trilafon therapy.

When compared to other phenothiazine derivatives employed as tranquilizers, Trilafon was found to cause fewer troublesome and potentially serious side effects. The value of this drug is the small degree of functional disability it causes. Its proper use abbreviates hospitalization; accelerates the process of normal recovery; facilitates psychotherapy; and permits ambulatory treatment for many patients.

A STATISTICAL COMPARISON OF TWO METHODS OF ECT¹

PETER D. KING, M. D.²

Patients for ECT on the acute female treatment service were placed alternately on "threshold" (1) and "glissando" methods of using the Reiter RC47D. In the "threshold" method, the warmed machine with current selector on 5, maximum frequency modulation, and current intensity at about 5 milliamperes, was turned from "sample" to "treat." The patient was kept in a mild convulsion for about 15 seconds, then if she did not go into a full tonic convulsion, the current was increased until she did. Five to 10 milliamperes would induce this "threshold" convulsion in most females, although some required more current. In the "glissando" method, the convulsion was induced rapidly by twisting the current intensity knob so that the current went from a low to a maximal value within one or two seconds after switching to "treat."

Most of the patients were fresh schizophrenics, and received 20 ECT. Patients were begun on treatment each day 6 days a week until confusion persisted, then they were given 3 ECT a week. The choice of patients was entirely random, and there was no statistically significant difference between the average age of the two groups.

Patients on daily treatment were timed from when they left the treatment room until they awoke from gentle stimuli. Patients were also evaluated for persistent confusion as follows: trying doors and otherwise wandering confusedly—1-plus; slightly more confused, and denudative—2-plus; still more

confused, and incontinent of urine and/or feces—3-plus; most confused, and requiring spoon-feeding—4-plus.

RESULTS

A. Eight of 29 patients given the "threshold" technique and evaluated for confusion showed persistent confusion, and were marked with a total of 15-plus, while 11 of the 28 patients given the "glissando" technique so evaluated showed persistent confusion and were marked with a total of 25-plus. This difference was statistically significant.

B. The two groups averaged 3.8 ± 1.5 and 3.6 ± 1.3 minutes for recovery following ECT. This difference is not statistically significant.

C. The 29 patients on "threshold" method referred to in A received 10.5 ± 3.1 and the 28 on "glissando" received 8.6 ± 2.9 treatments at the rate of 6x/week before persistent confusion led us to decrease the frequency of ECT to 3x/week. This difference is statistically significant.

D. Recovery rates as determined by release from the hospital were slightly greater by "glissando" technique (12/28) than by "threshold" technique (8/28). However, this difference was not statistically significant, and seems to be explained by a larger number of return patients—with a worse prognosis—on "threshold" treatment.

E. Patients on ECT who complained of back pain were x-rayed, and the film was read by a radiologist unaware that a study was in progress. Only one patient out of 55 who were given the "threshold" method re-

¹ A more complete report of this study has been submitted to the *Journal of Nervous and Mental Disease*.

² Warren State Hosp., Warren, Pa.

ceived a spinal compression fracture. Six patients out of 44 who were given the "glissando" technique had compression fractures of the spine. This difference is statistically significant. There were no other complications except for a "questionable" fracture of D5 and D6 in a patient who was being treated by the "glissando" technique.

In conclusion, significantly more frequent

treatment was given with less persistent confusion and significantly fewer spinal compression fractures by using the "threshold" instead of the "glissando" technique with the Reiter RC47D.

BIBLIOGRAPHY

1. Impastato, D. J., and Berg, S.: *Am. J. Psychiat.*, 112:932, 1956.

AN INTERESTING REACTION TO A TRANQUILIZER: TONIC SEIZURES WITH PERPHENAZINE (TRILAFON)¹

JAY SHANON, M.D.,² STANLEY M. KAPLAN, M.D.,³ CHESTER M. PIERCE, M.D.,⁴ AND W. DONALD ROSS, M.D.⁵

This preliminary note concerns a neurological reaction to a tranquilizer observed by the first named author, whose detailed description awaits publication.

Among 560 patients of all ages being given perphenazine in the management of dermatological disorders, 7 patients, all under 23 years of age, developed the following reaction. There were attacks of stiffness of the neck or face or protrusion of the tongue, sometimes with screaming or other variations. These attacks lasted about 5 to 10 minutes and recurred at intervals. They ceased with discontinuation of perphenazine, with reduction in dosage, or when barbiturates, codeine or aspirin were added to the medication. They were reproduced by the administration to one patient of perphenazine in a disguised form but not by a placebo resembling perphenazine. There were no serious consequences of these attacks.

Neurological consultations occurred during the intervals between the attacks or after they had subsided and revealed no abnormal neurological signs. During an attack witnessed by two of the authors of this note there was tonic spasm of the tongue and platysma and slightly of the facial muscles,

with sufficiently increased tone in the right upper limb to produce an incomplete Hoffman sign which was not present after the attack. During the attack the motor functions of the cranial nerves were intact apart from the spasms mentioned. The patient could talk to the examiner although her speech was indistinct because of spasm of the tongue. By the time of the attempt to elicit a Hoffman sign on the left the attack had subsided.

The impression was of a tonic seizure, maximum in motor pathways through the hypoglossal and cervical portion of the facial nerves, with no impairment of consciousness.

The only reference found in the literature to such a reaction to a tranquilizer are two passing comments on "transient episodes of tonic spasms" from chlorpromazine (1), especially in "the neck, tongue and pharyngeal muscles" (2).

This phenomenon could be explained by excitation in final motor pathways beginning in the lower brain stem and upper cervical region, probably from suppression of inhibitory stimuli through higher pyramidal and extra-pyramidal pathways, as in attacks of decerebrate rigidity. This syndrome may be of importance to the further understanding of the mechanisms of action of tranquilizers. It does not appear to represent a serious toxic hazard.

BIBLIOGRAPHY

1. Cohen, I. M.: *Am. J. Psychiat.*, 113: 115, Aug. 1956.
2. Hollister, L. E.: *New Eng. J. Med.*, 257: 170, July 25, 1957.

¹ From the Departments of Dermatology and Psychiatry, University of Cincinnati. Trilafon supplied by Harry V. Pifer, Division of Clinical Research, Schering Corporation.

² Instructor in Dermatology, (Psychosomatic Dermatology Fellow)

³ Assistant Professor of Psychiatry

⁴ Instructor in Psychiatry, (Career Teaching Fellow, USPHS)

⁵ Associate Professor of Psychiatry

CORRESPONDENCE

FREUD AND LAY PSYCHOANALYSIS

SIR: The third volume of Ernest Jones' book, *The Life and Work of Sigmund Freud*, Basic Books, New York, 1957, contains a chapter on Lay Analysis, pp. 287-301, which ends with a letter by Freud written a year before his death. Quoth Freud, "The fact is, I have never repudiated these views and I insist on them even more intensely than before, in the face of the obvious American tendency to turn psycho-analysis into a mere housemaid of Psychiatry."

Apart from personal animosities, Freud considered psychoanalysis as independent from medicine and psychiatry, because to him it was a kind of basic anthropology or philosophy—Freud's abhorrence of the latter term notwithstanding. It was out of such ideas that Freud definitely favored lay analysts without medical or psychiatric training. To his mind their qualifications consisted precisely of their lack of previous training and that would enable them to avoid the pitfalls of medicine and psychiatry. Immanuel Kant has answered Freud's fears concerning "handmaiden." Said Kant, "There are two types of handmaidens, the one carries her mistress's train but the other walks ahead of her bearing the torch to lighten up her path."

We remember the Latin saying, *quod licet Jovi, non licet bovi*. Freud had an excellent training in biology, medicine and neurology, he could well afford to march on into the uncharted continent which was to become psychoanalysis. In the hands of laymen without training psychoanalysis is in deadly danger

of silting. Contrary to what Freud thought, increasingly so toward the end of his life, psychoanalysis is not complete or immutable. There is no *Roma locuta, causa finita* in any science. Psychoanalysis needs a constant bloodstream of fresh experiences no less than any other science. Innocence of training may possibly preserve psychoanalysis of the 20s and early 30s as a museum piece. It seems that Freud was not aware for what lay analysis was heading.

The Congresses of the *Allgemeine Arztliche Gesellschaft für Psychotherapie*, 1926-31 (cf. *Am. J. Psychiat.*, March 1956) convened since 1926, tried to fill the artificial gap by establishing close relationships: (a) between psychoanalysis and the other systems, (b) between all the systems and clinical psychiatry and medicine. Consequently, those lacking a basic biological knowledge could participate in the discussions only as specialists in their particular fields. They might contribute experimental research and experimental method which, however, in their importance to psychotherapy must be evaluated and put together by medically and biologically trained physicians. Let us hope that in the question of the lay analysis, *mutatis mutandis*, the great word said of Kant will come true: Kant verstehen heisst über ihn hinausgehen. (To understand Kant means to go farther than he did.)

W. G. ELIASBERG, M. D., PH. D.,
New York City.

SCHIZOPHRENIA

Editor, THE AMERICAN JOURNAL OF PSYCHIATRY:

The purpose of this letter is to focus specific attention upon one of the major health menaces of our time—schizophrenia.

Until now, public support has been directed towards the all-inclusive field of Mental Health. But psychiatry has long out-

grown such swaddling clothes, and the phrase, "Mental Health," now seems too diffuse, too ambiguous, too inadequate to clothe its constituent parts. That is especially true of one of its largest segments—schizophrenia—which many believe may provide the key to all mental disease. It is, therefore, deserving of much closer public and even

professional scrutiny than it has previously received.

An analogy to illustrate this point may be found in the field of public health. It would be unrealistic today to expect the public to give blanket support to the huge program encompassed in the entire purview of public health. That is why *special* foundations and funds have been established for some of its paramount hazards: heart disease, cancer, polio, etc. Only by such *specific* appeals to public conscience and public security can maximum interest and support be aroused.

The basic psychological reason is obvious. It is easier for an individual to identify with a particular disease—such as heart disease, cancer, schizophrenia—that has been publicly emphasized, that he has observed in others, and fears in himself, than to identify with such generalizations as "Public Health" or "Mental Health."

Hence, the need for the creation of a specific foundation for research and treatment in schizophrenia, sponsored by a parent organization and open to public participation and support in much the same way as the Cancer Fund, Heart Fund, etc.

Undoubtedly, schizophrenia is one of the most tragic diseases of mankind, not only in terms of intrinsic seriousness, but also in our relative helplessness to understand or combat it. Unlike cancer or heart disease, which usually strikes its victims after the prime of life, and often results in merciful death, schizophrenia finds its prey among young men and women on the threshold of maturity, and may condemn them to life-long isolation from the world about them. There is scarcely a family that has not been affected directly or remotely by this scourge.

Each year about a quarter of a million new patients are admitted to our mental hospitals. Of these, some 21%—over 50,000—are schizophrenics (a number exceeded only by the 27% who make up the senile and arteriosclerotic psychoses of old age). Furthermore, because of the relative youth of schizophrenic patients, and because of the chronicity of the disorder coupled with a relatively low death rate, schizophrenics tend to accumulate, and eventually make up the bulk (60%) of the patient population. Since there are more than 700,000 patients in our

mental hospitals, schizophrenics account for about 400,000 of the mental patient population at any one time.

This means that one out of every four hospital beds in this country is occupied by a schizophrenic, a figure so shocking that it challenges the imagination!

It is, therefore, clear that schizophrenia represents a greater threat to potentially productive young people than any other disease, mental or physical. It may well be called the mental crippler of youth.

Some comparative financial statistics will serve to point up the pathetic inadequacy of available funds for research in all types of mental illness, to say nothing of schizophrenia *per se*. About \$5.00 per patient per year is presently being expended for research in mental illness, as compared with \$28.00 per patient in poliomyelitis, tuberculosis, or cancer. If a similar amount, proportionately, were available for *all* mental illness, the funds for research would have to be at least \$33,000,000 annually. On a basis of comparative specificity, schizophrenia alone would deserve such a sum.

To achieve that goal, schizophrenia should first be extricated from the relative anonymity of "mental illness," and given autonomous status and emphasis. Information can then be more widely disseminated, public support more actively solicited, and research facilities expanded. Some notable steps have already been taken in these directions under the aegis of the National Institute of Mental Health, the National Association for Mental Health and the Supreme Council, 33rd Degree Scottish Rite, Northern Masonic Jurisdiction.

But psychiatry has grown too big, schizophrenia too important to be confined to self-contained groups. It is time that schizophrenia be admitted to the public domain and be given sufficient impetus to pervade the public consciousness in its own right.

A sampling of public opinion has indicated enthusiastic endorsement of a special foundation and fund for schizophrenia, and an administrative cadre is in the process of organization. This is in no way intended to supplant existing facilities, but merely to encourage greater public interest and support.

STANLEY R. DEAN, M. D.,
Stamford, Conn.

COMMENT

SOME CURRENT ECONOMIC AND SOCIAL PROBLEMS IN RESIDENCY TRAINING

The recent report by Drs. Potter, Klein, and Goodenough (May issue this Journal) underlines a number of the difficulties facing both the psychiatric trainee and the psychiatric educator in 1957. Following World War II there was a large influx of relatively mature physicians interested in psychiatric training. The G.I. Bill, war-time savings, and stipends awarded under the newly passed Mental Health Act started a trend which has seen psychiatric residents become progressively more the financial elite among resident trainees. Most surgical and medical residents look enviously at the \$200 per month stipend paid to a beginning psychiatric resident, even in the more austere of psychiatric programs. And they must feel impotent jealousy, if not rage, on hearing that some of their medical school classmates are beginning psychiatric training in the junior executive class financially. A recent summary of beginning first year stipends of 10 excellent university training programs in psychiatry gives an average monthly figure of \$331. The beginning figure for 10 of the better state hospital residencies is \$410 per month and in one of the largest state hospital systems, monthly stipends of \$541 exist.

All of this would lead one to hope that the financial difficulties of the trainee, if not of the program director who is often scraping the bottom of the financial barrel to compete in this market, would be well in hand. Yet, the report of Potter, *et al.*, on psychiatric training costs indicates the rather desperate straits in which many of our trainees find themselves. Much, but not all of this, appears related to the costs of personal psychoanalysis and, often in addition, institute tuition and supervisory fees. To meet the cost of psychoanalytic training and therapy, the resident must, unless he is either wealthy or has married well financially, dig deeply into savings, borrow from relatives or other sources, seek income through private practice

carried on during evenings and weekends and other times outside of the usual working hours, or rely heavily on the income of a working spouse. These appear to be the major alternatives for the psychiatric residents desiring psychoanalytic treatment and training during their residency period. The data from Potter, *et al.*, indicate that 2 in 5, and in some areas 3 of 4 of the third year residents in personal analysis or psychoanalytic training are engaging in private practice. Often this is quite an extensive practice and immediately raises the question of the extent to which a resident can effectively carry on the clinical duties of a resident and the necessary learning in clinical psychiatry at the same time. The effects on health, happiness and family tranquility are often deleterious. In addition, there is another extremely social problem, that of the psychiatrist becoming "fixed" geographically in the area in which he trains. This reduction in geographic mobility results in overcrowding of such areas as New York, Chicago, San Francisco, etc., with psychiatrists and psychoanalysts. The extent to which the long analytic training and attendant private practice fix the young psychiatrist in private practice and prevent subsequent careers in teaching, research and public service, etc., must also be considered. This is not to depreciate the value and importance of the private practice of psychiatry and psychoanalysis. It does raise, however, the very important question of the social consequences of the tremendous shortages in important fields such as academic psychiatry, research psychiatry, administrative and public service.

The New York group suggests a number of possible solutions, based on their personal reports from almost 700 trainees. One solution in particular deserves careful attention, namely the integrated training in psychiatry and psychoanalytic medicine. This is currently being attempted in a number of centers

with a fair degree of satisfaction. The expense to the training institution, however, is great and the number of psychiatrists who can be trained in this manner is limited. Unless the training period is prolonged well beyond the usual 3-year period, one would seriously question the adequacy of the training in either field.

A much more comprehensive and realistic solution to this whole problem appears necessary. A careful re-study of the report of the 1952 Cornell Conference On Psychiatric Education may be in order: "The crux of the problem is that we must somehow enlighten 'the beginner' and orient him more realistically. The problem is somewhat analogous to that of the medical student in regard to surgery. Many begin their medical studies with a great admiration for surgery and with an ambition to become surgeons, but further knowledge brings a broader perspective and opens new opportunities in other directions." The average beginning psychiatrist enters the field perplexed and searching for answers. As he progresses during the first few months of his training, he is likely to become more anxious and more bewildered. He looks around for direction and for an all-encompassing frame of reference which will guide him. At this point psychoanalysis often becomes the Holy Grail. Rather than seeing psychoanalysis as a valuable method of investigating human behavior, as a body of theories derived therefrom, and as a therapeutic technique, the beginning resident sees it as an open sesame to solving all the complex problems facing his patients and himself. In this setting too many residents see their only salvation in psychoanalytic training for themselves.

This is not to imply that anxiety in the residency is the only motivation for advanced psychoanalytic training. Far from it. But it is an important aspect. The psychiatric educator, whether he be a psychoanalyst or not, can do a great deal to rectify this aspect of the problem. He can do this by improving the quality of psychiatric training and particularly supervision during the early months of training. All too often the resident is put out to pasture unattended. Careful supervision and an attempt to give the beginning resident a broad overview of the

field, including psychodynamics, but also including the social and bio-physiological aspects of mental functioning and disease would go a long way in counteracting this early and unrealistic over-evaluation of psychoanalysis as a cure of all problems and the solution of all mental illness.

It would be well to emphasize the "virtually unanimous agreement" of the 1952 Cornell Conference that "it is not necessary to be psychoanalyzed in order to develop competence as a psychiatrist, including competence in psychotherapy and psychodynamics." The words of Dr. Karl A. Menninger at this same conference should help beginning residents to view this problem in a more realistic perspective. "I applaud this statement that one does not have to be psychoanalyzed to be a good psychiatrist. You may think that it is obvious, but the residents don't believe it, and I don't know how you can convince them. I hope this statement will help, but I don't think it is enough." The fact is that the necessary awareness of one's own personality patterns, areas of threat, anxiety and hostility, tendencies to "project," and "blind spots" resulting from defense structures can be obtained in other ways. More often than not, the process of personal maturing among psychiatric residents needs a little help. However, a short period of psychotherapy for themselves, training in interview techniques, and the indirect psychotherapy implicit in competent training supervision, can be sufficient for most individuals.

Financial pressures consistently lead potentially gifted teachers to concentrate their efforts in more lucrative activities, in spite of the fact that teachers play perhaps the most vital role in the profession. We may lose some of our best residents into private practice. I also remember an instance of an intern with an extreme interest in neurology who felt he should enter psychiatry because this provided sufficient income to marry. The question of individual incentive, varying motivations, and specific talents must always be of paramount concern to all educators, and particularly those in psychiatry.

Without discussing the contribution of psychoanalysis to psychiatry, it is equally true that pathology is the bulwark of our concepts of physical illness. It no more fol-

lows, however, that we can solve the tremendous problem of mental illness in this country by training most psychiatrists as psychoanalysts, than that we can advance the fight against physical disease by training most physicians as pathologists. The analogy is

admittedly not entirely accurate but it does contain enough truth to give us direction in our attempts to solve some of the pressing problems reviewed by Potter, Klein, and Goodenough.

F. G. E.

WAGNER-JAUREGG AND THE "PRIORITY" OF PRODUCING ARTIFICIAL FEVER FOR TREATMENT OF GENERAL PARESIS

In the June issue of *The American Journal of Psychiatry* (pp. 1057-1058) Maximilian Silbermann stated: "He (Wagner-Jauregg) noted that intercurrent febrile illnesses favorably influenced the course of general paresis. This inspired him to imitate 'nature's experiment' by producing artificial fever in his patients. Neither disappointments nor failures in his preliminary investigations deterred him from reaching his goal, the cure of this previously fatal disease."

There is a rather short note on Alexander S. Rosenblum's work submitted by B. Oks in the German language entitled: "*Ueber die Wirkung fieberhafter Krankheiten auf Heilung von Psychosen.*" ("On the Influence of Febrile Diseases in the Cure of Psychoses.") (*Arch. f. Psych.* 10:249, 1880; submitted in 1878). Clarence A. Neymann after extensive search found the original article in the Library of Congress, written in Russian, (*Trudi vrach. Odessk. g. boln.*, 1876-1877, Vol. 2.) This paper was translated by S. J. Zakon under the title: "Relation of Febrile Diseases to the Psychoses." (*Arch. of Derm. and Syphilology*, 48:52, 1943.)

In his excellent treatise Rosenblum states:

Febrile disease has a dual relationship to the psychoses. On the one hand it plays an important role in the causation of psychoses; on the other, the occurrence of a febrile disease is not without influence on the course of the psychosis. Frequently the mental disturbance improves and disappears entirely with the development of fever.

Rosenblum quotes many others who before him made similar observations; among them are Schlager, Jakobi and Sydenham. He especially gives full credit to Nasse who in 1770 described and tried to explain by anatomico-pathologic observations the recovery

from psychosis after the patient suffered from typhoid. The earliest report of the beneficial action of fever in improving the course of mental disease seems to be that of S. Tuck (1813), followed by J. E. D. Esquirol (1838), F. Koster (1848), C. Amelung (1859), W. Griesinger (1865) and H. Maudsley (1876).

Rosenblum observed "curative effect" of the following febrile diseases: 4 cases of malaria, 6 cases of typhoid and 22 cases of recurrent fever. In a footnote of the German report Oks states: "According to a personal communication of Rosenblum, recurrent fever was produced in all the 22 cases by inoculation with spirilla." For obvious reasons Rosenblum did not dare to publish in Russia his successful experiments obtained by artificial inoculation. He was thus the first physician to induce artificial fever in the human for the treatment of mental diseases. He finishes his paper with the following statement:

It is possible, too, that some of the patients might have recovered without fever. However, although mindful of these possibilities, I still insist that febrile disease has a curative effect on the psychoses. This fact seems well proved.

In 1935 during the International Neurological Congress in London the present writer asked Wagner-Jauregg whether he knew Rosenblum's work on artificial fever treatment. Wagner-Jauregg stated that not only did he know about it but that he gave Rosenblum credit for his daring undertaking.

Notwithstanding all these facts we owe everlasting gratitude to Wagner-Jauregg. At a time when general paresis killed its victims in at most a very few years, he worked out with ingenious and indefatigable effort a fever treatment which gave many patients

such marked improvement that they were enabled to return to gainful occupations for several years. At the present time some of the antibiotics are supplanting the fever treatment. No matter what kind of treatment we are giving, general paresis is still with us. For this tragic fact we physicians are to be blamed. We know the causative spirochetes; we know the mode of their spreading. The time is ripe to stop the spread of lues. In neglecting a concerted effort we are committing an unforgivable wrongdoing. We do not need pioneers, or even discussions on priority of a preventable disease,

but we need fighters who will eliminate this serious major psychosis, the cause of which is known to us. If we do not make some radical attack to eliminate the spread of syphilis we still will have general paretics. In the United States along 156,000 cases were reported in 1953. (T. Rosenthal and J. E. Vandow: "Venereal Disease Control in New York City," Pub. Health Rep., 71: 381, 1956.) And who could tell how many cases were not reported?

VICTOR E. GONDA, M. D.,
Veterans Administration Hospital,
Palo Alto, California.

PREJUDICE

There are only two ways to be quite unprejudiced and impartial. One is to be completely ignorant. The other is to be completely indifferent. Bias and prejudice are attitudes to be kept in hand, not attitudes to be avoided.

—CHARLES P. CURTIS
(*A Commonplace Book*, 1957)

GROOVES

The situation (modern professionalism) is dangerous. It produces minds in a groove. Each profession makes progress, but it is progress in its own groove. Now to be mentally in a groove is to live contemplating a given set of abstractions. The groove prevents straying across country, and the abstraction abstracts from something to which no further attention is paid. But there is no groove of abstraction which is adequate for the comprehension of human life.

—A. N. WHITEHEAD

NEWS AND NOTES

SUMMARY OF SECOND INTERNATIONAL CONGRESS FOR PSYCHIATRY, SEPTEMBER 1-7, 1957.—The second International Congress for Psychiatry held in Zurich, September 1-7, has been most successful owing to the gigantic efforts of Dr. W. A. Stoll, secretary, and Dr. Manfred Bleuler, president.

The greatest interest of the congress seemed to be directed towards psychopharmacotherapy. Testimony from many nations proved the universal efficacy of this method, dispelling the notion that neuroleptic drugs are placebo-like in action.

Meprobamate, perphenazine, methylphenidate hydrochloride, reserpine, WL-763, deaner tartrate, Vespring, iproniazid, chlorpromazine, benactyzine, d-lysergic acid diethylamide, Rauwolfia Serpentina, mepazine, Compazine and others were prominently mentioned as useful in neuropsychiatric patients, and their mode of action, as elucidated by biochemists and the physicians using them, occupied many hours of the Congress. Psychopharmacotherapy was the newest form of treatment brought before the members.

Psychotherapeutic procedures held the interest of many at diversified sessions, while psychosurgery was represented by 6 papers.

Films on meprobamate, d-lysergic acid diethylamide and childhood schizophrenia were shown by participants from the United States. Other films showed the improvement in European mental hospitals since the use of neuroleptic drugs, the effects of nutrition on schizophrenics and childhood psychoses.

Over 300 papers were divided into sessions with the following themes: psychopharmacotherapy (14), psychotherapy (9), mixed subjects (9), pathophysiology (4), shock therapy (4), biochemistry (4), nosology (4), child psychiatry (4), historical (4), anthropology (4), art in schizophrenia (3), genetics (3), psychology (3), somatization (2), psycho-endocrine (2), organic etiology (2), symptomatology (2), body structure (2), sociopathic problems (2), milieu (2), dynamics of schizophrenic lan-

guage (1). This indicates the current trend of psychiatry.

The Congress dinner held at the Kongresshaus and Hotel Dolder brought together harmoniously at each table representatives from many nations, from different disciplines and with different political beliefs.

VISITS TO BURGHÖLZLI AND BASLE

On 8-29-57, I visited Burghölzli, a beautifully kept hospital of about 550 patients, where Eugen Bleuler was director and where his son, Manfred is now the director.

In attending Dr. Manfred Bleuler's clinic, I found that he and Dr. W. A. Stoll and the staff of the hospital, had not used phrenotropic drugs extensively either in dosage or number of patients, and they used the shock therapies in only a small percent of patients, depending more on their one to three ratio of nurse-to-patient care.

They said they "were happy to have the drugs shorten the psychotic period of mental illness, but do not think it is causal therapy." Dr. Bleuler thinks the cause of schizophrenia is "inheritance and predestination (fate)." Dr. Stoll explained that they have difficulties with relatives in using drug therapy and also in keeping patients on a maintenance dose outside the hospital because "they do not like to take medicine."

I also visited the great Ciba chemical plants at Basle where extensive animal studies were demonstrated concerning d-lysergic acid diethylamide, showing the importance of this agent in determining the action of other phrenotropic drugs, as well as its own potency as a euphoriant.

In another laboratory, where Serpasil (reserpine) was first isolated in 1952, further animal studies demonstrated the steadily mounting evidence of reserpine's beneficial action in a growing list of physical and psychological pathological conditions. The action of methylphenidate hydrochloride was clearly indicated on drums during studies on the rat.

A third laboratory demonstrated by animal

tests the efficacy of iproniazid in tuberculosis, and now in the neuroses and psychoses.

The time and the place of the Third International Congress for Psychiatry has not, as yet, been decided. Canada and South America have been prominently mentioned and some favored a congress every five years, others every seven.

Simultaneous translations into the various languages at all sessions will facilitate the understanding of the people as well as of the material presented.

The beautiful garden city of Switzerland, Zurich, with its back-drop of grandeur, the Alps, its sail boats suggesting the sea and its delightfully hospitable people have contributed magnificently to the scientific benefits of the Second International Congress for Psychiatry.

VERONICA M. PENNINGTON, M. D.
Mississippi State Hospital,
Whitfield, Miss.

AMERICAN HEART ASSOCIATION.—This Association has announced that its annual campaign for research funds will be conducted February 1 to 28, 1958. When it is realized, as the Association reports, that cardiovascular diseases are responsible for 54% of all deaths in the U. S., that is, more than all other causes put together, it is obvious that this campaign deserves the support of all who are interested in the health of the people.

DANGERS OF TRANQUILIZERS IN TABLET FORM.—Dr. John Meyer, director of education and research at the Independence Mental Health Institute, Independence, Iowa, reports that problem children and adolescents at the Institute who were given tranquilizers in tablet form, developed the habit of hiding the pill under the upper lip, tongue, cheek or in the hand, and would save them until a large number were accumulated which could be taken all at once to induce a "jag," but leading to sickness and vomiting. Other instances are reported by Dr. Meyer where the child 'smuggled' the pill and then simply disposed of it. Dr. Meyer believes that the problem of smuggling tranquilizing pills is a much larger one than is commonly suspected, and that it could be solved by administering

tranquilizers to undependable patients only in liquid form.

FOURTH ANNUAL INSTITUTE OF CHILD PSYCHIATRY.—The program theme of the fourth annual Institute which took place in Los Angeles, Calif., November 16, 1957, was "Hospitalization—Its Effect on Children." Guest speaker was René A. Spitz, M. D., who led the seminar on The Concept of Stress, and the Effect of Emotional Deprivation in Early Childhood.

This Institute was inaugurated to acquaint pediatricians and other physicians whose practice includes children, with the psychodynamic concepts in child development and childhood illnesses.

THE WOODS SCHOOLS.—President Edward L. Johnstone of the Woods Schools, Langhorne, Pa., announced the opening on Oct. 12, of the Child Study, Treatment and Research Center, offering a wide range of services for children with mental, emotional, and physical handicaps.

First of its kind in the country, the Center is affiliated with 3 universities, as well as a metropolitan hospital and a child guidance clinic. Dr. William C. Adamson, child psychiatrist, heads the resident staff. The Center's services are available not only to children of The Woods Schools but to all others who can be accommodated on an outpatient basis. Boys and girls, aged 9 to 18, with emotional difficulties, may also be enrolled for a 3 to 6 months period.

Cooperating with the resident staff are the following affiliations: University of Pennsylvania's Department of Psychiatry and Graduate School of Social Work; Children's Hospital of Philadelphia; Philadelphia Child Guidance Clinic; Special Education Departments of Rutgers University and Teachers College, Columbia University.

RECOMMENDATIONS FOR REPORTING STUDIES OF PSYCHIATRIC DRUGS.—A bulletin has been issued by the U.S. Public Health Service on the findings and recommendations of the conference held in Washington D. C., Jan. 1957, concerning the reporting of psychiatric drug studies.

The purpose of the conference, arranged

by the Psychopharmacology Service Center of the National Institute of Mental Health, in collaboration with The American Psychiatric Association, was to consider what kinds of information would make clinical reports more informative, more meaningful and more conducive to improved research efforts.

Reports of 4 of the 5 committees on which the members served are presented in this bulletin: Patient Selection and Description; Evaluation of Change; Description of the Treatment Setting; and Drug Therapy and Toxicity Reactions. Each report contains detailed analysis and delineation of the problems of adequate reporting of clinical drug evaluation studies, and an outline of the factors that any research worker must consider when reporting such studies.

The bulletin may be obtained from the Psychopharmacology Service Center, National Institute of Mental Health, Public Health Service, Bethesda, Md.

JUDGE BAZELON HONORED.—Dr. Harry C. Solomon, president of The American Psychiatric Association, presented to Judge David L. Bazelon of the United States Court of Appeals, District of Columbia, a Certificate of Commendation for his contributions to better understanding between psychiatry and the legal profession, at the Association's 9th Mental Hospital Institute in Cleveland, September 30, 1957.

The citation stated that Judge Bazelon "through his opinions has brought to American jurisprudence the concept that when criminal acts are perpetrated as a result of mental illness, the courts will consider the nature of the illness of the accused. In this achievement he has removed massive barriers to communication between the psychiatric and legal professions and opened pathways wherein together they may search for better ways of reconciling human values with social safety. The American Psychiatric Association extends to him its deepest admiration and gratitude."

In his presentation remarks, Dr. Solomon stated that Judge Bazelon, in the 1954 Durham case and other cases since then, had laid down for his court the principle that an accused is not criminally responsible if his unlawful act is the product of a mental disease or defect.

"WORLD OF MEDICINE" TELEVISION SERIES.—The recently formed Organization for National Support of Educational Television (ONSET) has planned the production of quality programs on a national scale. Business firms will be invited to act as "patrons," but will exercise no influence or controls over program content.

The first series, entitled "World of Medicine" consists of 13 medical programs produced with the cooperation of numerous professional societies, universities, physicians and research scientists. No actors, scripts or dramatized sequences have been used; authorities and specialists in various fields of medicine created their own roles. Among the subjects of these half-hour programs are Radiology, Allergy, Reading the Brain, The Eye, Pediatrics, Veterinary Medicine, and Geriatrics.

This first series has been produced under the patronage of Shering Corporation, and the kinescopes will be made available by them after the initial showings, to medical and lay educational and civic groups.

For further information contact "World of Medicine," Science Information Bureau, 445 Park Avenue, New York, N. Y.

NATIONAL LEAGUE FOR NURSING.—The NLN has issued a 15-page pamphlet entitled *Psychiatric Nursing Supplement to the Self-Evaluation Guide for Schools of Nursing*. It has been prepared by Eleanor Frany, R.N., Assistant Director of NLN Mental Health and Psychiatric Nursing Advisory Service.

The guide is for the use of nursing instructors in schools of nursing and in psychiatric hospitals to help develop, evaluate and improve the psychiatric nursing area as an integral part of the total curriculum.

The supplement can be obtained by writing to The National League for Nursing, 2 Park Avenue, New York 16, N. Y. Price: 40¢.

U.S.P.H.S. AWARDS FOR RESEARCH IN NEUROLOGICAL AND SENSORY DISORDERS.—The Public Health Service has announced a new program of financial support for advanced training of research scientists in the field of neurological and sensory disorders, to

be conducted by the National Institute of Neurological Diseases and Blindness, of the Service's National Institute of Health, Bethesda, Maryland.

Individual awards will be made for 9 months to one year, subject to renewal up to 3 years. Stipends may range from \$5,500 to \$14,800 a year.

Application forms and instructions may be obtained from the Chief, Extramural Programs Branch, National Institute of Neurological Diseases and Blindness, National Institutes of Health, Bethesda 14, Md.

Applicants must be citizens of the United States or applicants for citizenship. They must have completed either (1) the residency training requirements in a clinical specialty, or its equivalent, or (2) at least 3 years of pertinent postdoctoral training or research experience.

THE HOFHEIMER PRIZE.—The Hofheimer Prize of \$1,500 is awarded annually by The American Psychiatric Association for an outstanding research contribution in the field of psychiatry or mental hygiene, which has been published within 3 years of the date of the award. The competition is open to citizens of the United States and Canada not over 40 years of age at the time the article was submitted for publication; or to a group whose median ages do not exceed 40 years.

The next award will be made at the annual meeting of the Association in May 1958. Articles submitted before March 1, 1958 will be considered. Eight copies of each publication and data concerning age and citizenship should be sent to John I. Nurnberger, M. D., Chairman, Hofheimer Prize Board, 1100 W. Michigan St., Indianapolis 7, Indiana.

REVISTA DE CIENCIAS SOCIALES.—This new quarterly review is published by the College of the Social Sciences, University of Puerto Rico, under the editorial direction of Raúl Serrano Geyls, assisted by an editorial board of 10 members from the faculty of the Social Sciences.

The program of the *Revista* will be international and it proposes to publish original contributions, as well as translations of pertinent articles in related foreign journals, deal-

ing with all aspects of social relations. It invites international cooperation.

The first number (March, 1957) runs to 225 pages and contains the following articles; Society and the State (Martin Buber); The Political Basis of the Civil Service in Latin America (Pedro W. Amato); Family Structure and Fertility in Puerto Rico (Roubin Hill, *et al.*); Meta-economics (Leopold Kohr); Psychological Aspects of Industrialization (Beate R. Salz); Administrative Reorganization in Puerto Rico (Henry Wells); The Validity of Field Data (Vidich and Bensman); The British Caribbean Federation: the West Indian Background (Gordon K. Lewis).

The *Revista* contains also book reviews, abstracts from the periodical literature, and items of news.

The subscription price is \$3.00 per year. Correspondence should be addressed to the Director, Revista de Ciencias Sociales, Universidad de Puerto Rico, Río Piedras, P. R.

WESTERN NEW YORK PSYCHIATRIC SOCIETY.—This Society has now been officially accepted as a District Branch of The American Psychiatric Association. The present membership is 31 and the officers are: president: Dr. Evelyn Alpern; president-elect: Dr. Duncan Whitehead; secretary: Dr. S. Mouchly Small; treasurer: Dr. Clarence A. Vallee; councillors: Dr. John G. Robinson, Dr. L. Murray Rossman.

DR. PASAMANICK CHAIRS COMMITTEE ON NOMENCLATURE.—Dr. Philip M. Hauser, chairman of the U.S. National Committee on Vital and Health Statistics, a Committee of the Surgeon General, has appointed Dr. Benjamin Pasamanick, professor of psychiatry and director of research of the Columbus Psychiatric Institute and Hospital, chairman of a newly constituted national subcommittee on the classification of mental diseases.

The subcommittee will review the present section of the International Statistical Classification and recommend modifications which may be included in the revised edition of the *International Statistical Classification of Diseases, Injuries and Causes of Death*.

DR. BRACELAND HONORED.—Surgeon General Leroy E. Burney of the U. S. Public Health Service has announced the appointment of Dr. Francis J. Braceland, Psychiatrist-in-Chief of the Institute of Living and President of the Association for Research in Nervous and Mental Disease, as a member of the National Advisory Mental Health Council.

Dr. Braceland's duties as a member of the Council will consist of giving advice and making recommendations to the Surgeon General regarding programs of the National Institute of Mental Health.

The Council's 12 members who are each appointed for 4 years are leaders in medicine, science, education and public affairs. Ex-officio members include the Surgeon General of the Public Health Service as chairman, and two members representing the Veterans Administration and the Department of Defense.

SECOND WORLD CONFERENCE ON MEDICAL EDUCATION.—Doctors and medical educators of the world will be convened to consider the theme, "Medicine—A Life Long Study," at the Second World Conference scheduled for Chicago, Ill., August 30—September 4, 1959.

This conference will be sponsored by The World Medical Association. Collaborating organizations include: World Health Organization, International Association of Universities, Council on International Organizations of Medical Sciences.

The program committee is under the chairmanship of Dr. Victor Johnson, director of the Mayo Foundation for Medical Education and Research, University of Minnesota Graduate School, Minnesota.

Four general section subjects are currently being considered: 1. Basic Clinical Training for all Doctors; 2. Advanced Clinical Training for General and Specialty Practice; 3. Education for Research and Teaching; and 4. Methods of Continuing Medical Education Throughout Life.

Dr. Raymond B. Allen, Chancellor, University of California in Los Angeles has been named President of the Conference. Dr. Ray F. Farquharson, Sir John and Lady Eaton Professor of Medicine, University of To-

ronto, and Dr. Victor Johnson, University of Minnesota Graduate School of Medicine, will act as Deputy Presidents.

The program committee needs suggestions in the selection of conference topics and eminent doctors qualified to speak on these subjects. Every medical organization of the world is cordially invited to submit the names of these experts, the area of each expert's proficiency as well as topics and subjects the discussion of which at such a world forum, would prove useful in elevating the standards of medical education the world over.

Suggestions should be addressed to: The World Medical Association, 10 Columbus Circle, New York 19, N. Y.

GRADUATE SCHOOL OF PSYCHIATRY, NEW YORK STATE UNIVERSITY.—Thirty-four physicians from 6 downstate institutions of the Department of Mental Hygiene entered their first year of advanced graduate training in psychiatry at the Downstate Medical Center of the State University of New York, when the graduate school reopened in Brooklyn October 8, 1957.

The Graduate School, initiated last autumn, is under the joint direction of the State University Downstate Medical Center and the State Department of Mental Hygiene. It is under the direction of Dr. Sandor Rado.

Instruction at the medical school includes psychodynamics, psychopathology, clinical psychiatry, and comprehensive medicine, in addition to basic subjects such as neurochemistry, neuroanatomy, and neurophysiology. This year, as an adjunct to the teaching program, the school is opening a new outpatient clinic to be located on the grounds of Kings County Hospital Center at 600 Albany Ave., Brooklyn, which will be staffed by faculty from the school of graduate psychiatry.

THE A. E. BENNETT AWARD.—The Society of Biological Psychiatry is offering an annual award which was made possible by the A. E. Bennett Neuropsychiatric Research Foundation. The award will consist of expenses for attendance at the annual meeting, in addition to an honorarium of \$250. It

will preferably be given to a youngish investigator and not necessarily a member of the Society of Biological Psychiatry, for work recently completed and not published. The paper will be read as part of the program of the annual meeting of the Society and will be published in the same journal as the other papers read at that meeting. The honorarium will be awarded at the annual banquet.

Please submit papers in quadruplicate to Arthur A. Ward, head of the division of neurosurgery, School of Medicine, University of Washington, Seattle 5, Wash., or to the chairman, committee of award, Harold E. Himwich, Galesburg State Research Hospital, Galesburg, Ill.

CONFERENCE ON REHABILITATION OF THE MENTALLY ILL: SOCIAL AND ECONOMIC ASPECTS.—Sponsored jointly by The American Psychiatric Association (Committee on Research) and the American Association for the Advancement of Science (Division of Social and Economic Sciences), Dr. Milton Greenblatt of the Massachusetts Mental Health Center and representing the A.P.A. Committee on Research, has arranged this conference to be held in Indianapolis, Dec. 29-30, 1957.

The 4 sessions of the conference will deal respectively with General Problems, Hospital Aspects of Rehabilitation, Transition from Hospital to Community, and Community Aspects of Rehabilitation.

A group of eminent speakers will come together to participate in these meetings, and Dr. Greenblatt expresses the hope and the confidence "that this sterling group of individuals will bring forth something of value in the area that we have defined for our discussion."

ADOLF MEYER MEMORIAL AWARDS, 1957.—In the August 1957 issue of this JOURNAL it was recorded in the news section that two members of the Association, Drs. Cameron and Moll (both Canadians), had received these awards. Later information was to the effect that 6 awards were made. The other recipients were: Dr. M. Ralph Kaufman, Mt. Sinai Hospital; Dr. Paul V. Lemkau, then of New York City; Dr. Alexander Wolf, New York City; and Mr. Alton Blakeslee of the Associated Press, for his excellent reporting of mental health issues.

RETIREMENT OF DR. LEWIS.—Dr. Nolan D. C. Lewis, who retired last June as director of research at the N. J. Neuropsychiatric Institute in Princeton, has now resigned all his editorial responsibilities in connection with the *Journal of Nervous and Mental Disease*, *The Psychoanalytic Review*, and *Journal of Child Behavior*. He continues as consultant in research to the N. J. Neuropsychiatric Institute and to several hospitals and medical schools.

Dr. Jacob Finesinger assumes the editorship of the *Journal of Nervous and Mental Disease*.

AMERICAN GROUP PSYCHOTHERAPY ASSOCIATION.—The 2nd annual Institute and 15th annual Conference of the American Group Psychotherapy Association will be held at the Henry Hudson Hotel in New York City, January 22-25, 1958. For further information write to Dr. Milton Berger, program chairman, 50 East 72nd St., New York 21, or Dr. Cornelius Beukenkamp, public relations chairman, 993 Park Ave., New York 28.

The optimist proclaims that we live in the best of all possible worlds; and the pessimist fears this is true.

—JAMES BRANCH CABELL
(The Silver Stallion)

BOOK REVIEWS

MANAGEMENT OF EMOTIONAL PROBLEMS IN MEDICAL PRACTICE. Edited by *Samuel Liebman*. (Philadelphia: Lippincott, 1956, pp. 152. \$5.00.)

This practical and readable book is composed of 9 chapters, each by a well known psychiatrist. Each is a separate essay, taking up such subjects as psychiatric emergencies, sedatives, anxiety, repression, overeating and drinking, and community resources. Two of the chapters stand out for originality and forcefulness. Dr. George C. Ham has written a remarkable contribution on the "Management of the Multiple Complainer." He describes these patients brilliantly, and his specific advice as to how to manage them is full of wisdom; for example, "Listen to what the patient has to say; listen a long time and frequently, alone and without interruption," and he emphasizes that one must not be satisfied with a "correct" medical diagnosis but must arrive at a *total diagnosis*. In other words, the physician must understand what the patient is trying to communicate to those around him by his actions and words; what he is trying to say about his needs, feelings of being misunderstood, and lack of gratification in life. Then only can he be helped to assume responsibility for better techniques of living with reality. This paper should be required reading for every medical student! Likewise Dr. Alvarez' chapter on avoiding the production of iatrogenic disease is a most useful list of "don't's" for all doctors to peruse prayerfully. He tells the reader of the dangers of saying too much; and the great need for saying nothing about insignificant findings; also the harmful effects of taking refuge in silence. The mistakes are pointedly illustrated by examples of the author's long experience as a medical consultant.

Altogether, this is a well written, well edited and printed book, which will be enjoyable and fruitful reading for students and practitioners of medicine.

STANLEY COBB, M.D.,
Cambridge, Mass.

PSYCHOTHERAPY AND COUNSELING. By *Lawrence K. Frank, Rollo May, and others*. A reprint of Article 3, pp. 319-432, Vol. 63, *Annals of the New York Academy of Sciences*, 1956.

This is a report of a conference of 5 commissions, one each from the fields of medicine, psychology, social work, guidance, and the ministry. Each commission had 6 to 10 members, who worked together to prepare a written discussion of the manner in which their particular profession practices psychotherapy and/or counseling.

The obvious purpose of the conference was to make a concrete step toward better interprofessional understanding. The report shows an earnest striving toward this purpose. It is, however, only a beginning, for it shows the areas of agreement, even overlapping, more clearly than it does the

special difference and value of each profession. Each commission gives assent to the generalities: 1. that the separate professions do need each other; 2. that need for continuous self-examination of its methods is necessary to improve its work; 3. that psychotherapy requires not so much "treatment of" the patient (or "client") as it does "relating to" him; and 4. most emphatically of all, that there really is a definable method of helping people to grow and adjust, to achieve "maximum self-realization, compatible with the needs of others." However, each profession also seems to affirm, somewhat defensively, its own complete adequacy. Although for the person needing help, it may be almost a matter of chance which profession's hands he falls into first, nevertheless we are to rest assured that his obstacle to growth will be accurately discovered, whether internal or external; that the profession will know its limitations sufficiently to insure referral when needed; and that if psychotherapy and/or counseling is followed through, that profession may need no supervision from another profession.

Conditions are probably not as satisfactory as this might indicate and we hope that other conferences, in such an atmosphere of friendliness, will attempt to define the special limitations, as well as the special values, which each profession brings to this problem.

EUGENE ALEXANDER, M.D.,
Henry Ford Hospital.

THE RHYTHM OF EPILEPTIC ATTACKS AND ITS RELATIONSHIP TO THE MENSTRUAL CYCLE. Acta Scandinavica No. 105. By *Ruben Almquist*. (Copenhagen: Munksgaard, 1955.)

Out of a series of 400 consecutive cases, 146 proved suitable for analysis. The author uses a graphic technique for plotting seizures, and by simple inspection analyzes the cases for rhythmicity. Of 62 males analyzed, 18 showed a well marked rhythmicity. Of 84 females, 29 were positive. There is, however, no sharp dividing line between positive and borderline cases. Roughly speaking, the case material shows that the rhythm appears to be as frequent in male as in female patients. Some of the cases discussed are children but the available material did not make possible a comparison of different ages. However, the diagrams showed that rhythmical distribution of attacks was not confined to the reproductive age. The author's material indicates that though time relations between attacks and menstruation do exist, the idea that menstrual events are a primary and dominant cause of seizure rhythmicity must be abandoned, as the phenomenon of rhythmicity appears about as often in male as in female patients and is also to be found in children.

ELIZABETH G. FRENCH, M.D.,
Boston, Mass.

A MODERN PILGRIM'S PROGRESS FOR DIABETICS. By Garfield G. Duncan. (Philadelphia: W. B. Saunders, 1956.)

Garfield Duncan, a leading diabetic specialist, has written a clear comprehensive manual. He provides detailed instructions for the management of the day-to-day problems of diabetic patients. The book is more vivid and personal than similar manuals because it is written in the form of a story with a young social worker as the heroine. The diabetic patients whom she encounters have a variety of occupations, attitudes to the disease, and personal problems which are discussed in a practical and helpful manner. The effect is marred somewhat by an overly ponderous style, which tends to make the characters preach rather than talk, but this is a minor defect in an excellent book for diabetic patients and their doctors.

W. B. SPAULDING, M.D.,
University of Toronto.

SPECIAL EDUCATION FOR THE EXCEPTIONAL CHILD. Vol. III: Mental and Emotional Deviates and Special Problems. Edited by M. E. Frampton and E. D. Gall. (Boston: Porter Sargent, 1956, pp. 699. \$4.00.)

In this third of 3 volumes on special education, authorities in many different fields bring their particular insights to bear on the abnormally bright, the neurologically impaired, the emotionally disturbed, the delinquent, and the mentally deficient. The only general statement that can be made about special education for these heterogeneous groups is that they all require it; the ways in which it must be special will differ for each category, and often for each individual within that category.

First of all, there are the "gifted." The traditional belief that intellectual superiority and scholastic precocity are apt to lead to social maladjustment, neurosis, or psychosis is energetically denied. The evidence cited for a clear-cut association between superiority, stability, and career success is impressive, although some clinicians might question the adequacy of the criteria used to assess emotional health. All, however, will sympathize with the authors' desire to promote special educational programs for gifted children as a means of preventing the current waste of much-needed intellectual resources. Perhaps some of the contradictions between clinical experience and the results of follow-up studies on specially-educated gifted children might be explained by assuming that the early identification and accommodation of the latter had spared them the pathogenic boredom and frustration of the superior child surrounded by mediocrity and denied stimulating tasks.

In the group of papers dealing with brain-damaged children, the many variables, as well as the common features in these conditions are fully covered. Various combinations of perceptual and motor disabilities, together with the maturational lag observed in this group, make it especially difficult to assess the potentialities of these children and to devise special educational programs for them.

A primary aim of their education must be to pattern the unpatterned by developing and reinforcing sensory and motor correlations, so as to correct their faulty images of self and external reality. Because compulsivity is the defense *par excellence* of the brain-damaged child, the teacher is urged to tolerate this defense when established and encourage it if it has not yet appeared.

A whole series of papers on the cerebral palsied brings out the multiplicity of handicaps with which these children must cope and the many types of special educational and therapeutic techniques required to meet their needs. The importance of early socialization is stressed: in no group is it more vital to avoid isolation and homebound dependence. Self-acceptance must be encouraged by group-acceptance, and progress is much more likely to occur among peers than in an exclusively familial setting, where helplessness has its rewards.

Since most epileptic children are to all intents and purposes "normal" children except during seizures, they do not ordinarily need "special" education. If the seizures are too frequent, or too disturbing to others in the classroom, special classes or home instruction may be necessary, but whenever possible these children should be in regular classes. An occasional seizure need not disturb a class unduly if the teacher's attitude is casual and the innocuous nature of epilepsy is explained to the class. The educational problem posed by epilepsy has much more to do with lingering superstitions, discriminatory laws, and employer prejudices than with the actual status of the epileptic. But the persistence of these unfair attitudes can have unfortunate effects on the personality of the epileptic, and psychotherapy may be required if social ostracism or vocational impediments have been especially depressing or frustrating.

In the sections on the neurologically impaired, as throughout the volume, proper emphasis is placed on the emotional problems that are bound to complicate the education, social adjustment, and vocational aspirations of the exceptional child. Psychiatrists will find nothing new in the exposition of these problems, but will be interested to see how psychiatric findings are being presented to teachers and utilized in teaching. In the past, overemphasis on physical therapy, academic achievement, or vocational training often meant neglect of other equally important aims. This tendency seems, however, to have been reversed by the growing psychological awareness of modern educators, and the collaboration of the clinical psychologist and the psychiatrist is more often invited. Intellectual deficits may limit the degree of insight obtainable in many cases, and here "counselling" may be more useful than deeper therapy. In others, however, psychoanalysis has been highly successful in promoting realistic goals and tolerances of limitations.

"Problem children" are considered in 2 sections under the heading, "The Emotionally Disturbed and Juvenile Delinquency"—which is not to imply that the delinquent may not be emotionally disturbed, too. With these children the first challenge is a diagnostic one. Since parents are often blind to the

most florid symptoms in their offspring, it may fall to the teacher or the family physician to identify the problem child and his problem. Teachers, however, may not realize that the worst nuisance in the class may be less obviously disturbed than the quiet dreamer who causes no trouble; they must learn, therefore, to detect symptoms in "good" behavior, to accept the normality of much "bad" behavior, and to recognize those kinds and degrees of acting out or withdrawal which call for expert appraisal and perhaps psychotherapy.

The teacher who faces a "special" class of mal-adjusted children needs a "special" personality as well as special training. It takes a strong, flexible person to like and work with these "unlovable" children, but the rewards of success are nowhere greater. Particularly optimistic reports are coming in from experiences with "milieu therapy," best achieved in a residential setting. Special attention is given to the educational problems posed by schizophrenic children, and by emotionally disturbed children who are also mentally retarded. Psychotherapy is seldom a part of the "education" of those with low IQ's, because of the theory that normal or better intelligence is a *sine qua non* of therapeutic success. Some of the evidence cited here suggests that this is not the case, and that the disturbed dull do benefit from appropriate psychotherapy.

The analysis of delinquency is exhaustive and leads to the usual rejection of all single-factor explanations and single-remedy solutions. The peculiar difficulties of dealing with the delinquent are emphasized. In an illuminating discussion of delinquent attitudes, the rather embarrassing point is made that the personality of most "mental health workers" is eminently unsuited to coping with the delinquent personality. When a person motivated and trained to help is confronted by a person to whom "help" is anathema, the result is bound to be unfortunate. There are, however, enough instances of successful attempts to educate, treat, and socialize delinquents to inspire continued efforts, perhaps with techniques radically different from those employed with other emotional and character disorders.

A number of practical papers discuss the educational prognosis in the various types and degrees of mental deficiency and present programs of study suited to the late and slow learner. In the education of the mentally deficient, the emphasis is naturally on preparation for social competence and vocational adjustment, with a possible minimum of the three R's. Lists of suitable jobs are given, along with advice on the vocational counselling of deficient trainees. Here again, parents and the public come in for criticism. Parents may interfere with the adjustment of the deficient by unrealistic ambitions and snobbish resistance to the placement of a child in the only kind of low- or no-prestige job he is capable of performing. The public, although it seems increasingly concerned with the handicapped, has yet to demonstrate that it appreciates the magnitude and cost of the effort involved in making

the mentally deficient socially useful or the still higher cost of failure to do so.

Three final problems are considered which call for more vigorous educational efforts: the increasing number of the aged; narcotic addiction; and alcoholism. These are largely problems of preventive education. Suggestions are given for realistic (versus moralistic) alcohol and narcotics education in the schools. As for our aging population, this is not merely a matter of providing adult classes and group projects for the elderly, but rather of educating the young in those facts of life we repress more thoroughly than some of the more intriguing ones. For the facts of life include growing old and dying, and since our life-span has been significantly extended, education should prepare us for something beyond a successful career and counteract our present unhealthy overvaluation of youth. If education could somehow prepare people for an entire lifetime, not just for its most active phase, it would render a signal service to mental health.

Since this volume consists of a collection of papers—many of them reprints—there is, inevitably, considerable repetition of definitions and duplication of material. But overlapping is doubtless preferable to omission, and certainly the coverage of the subjects discussed is more than adequate. Much of the material is helpfully detailed: actual curricula; practical schemes for coordinating community resources; even such things as lists of specific toys and recordings. Each section is capped by an extensive list of references, subdivided into convenient categories: educational, medical, psychological, vocational, etc. Special agencies are also listed. All this makes the volume a valuable guide to further research.

The reviewer's compulsion to carp will be satisfied with a mild complaint about careless proof-reading. The text is marred by such deviant expressions as "bland (blood) incompatibility," "anaxia," "nystagmies," "intercranial" hemorrhages, and "oleographrenia" (an intriguing syndrome, not heretofore encountered). And an occasional statement confuses, as when we are told that the *psychiatrist* is responsible for the physical rehabilitation of the hemiplegic—surely a superfluous burden for this specialty.

After this exhaustive survey of a massive problem, one feels that the immediate needs of special education are enormous and multiple: funds, of course; more and better teachers; above all, perhaps, a more favorable atmosphere. We must overcome public reluctance to face the problems of the mentally ill and handicapped, and public hostility to attempts to identify and stimulate our intellectual elite. For we desperately need "well-educated" people—educated, that is, to be maximally useful at whatever level they can achieve: well-educated geniuses to advance our knowledge and technology, and well-educated morons to clean, crate, carry, and press the right buttons.

EDWARD L. FRENCH, PH.D.,
Devereux Schools,
Devon, Pa.

STUDIES IN TOPECTOMY. Edited by Nolan D. C. Landis, Carney Landis and H. E. King, (New York: Grune & Stratton, 1956. pp. 248. \$6.75.)

This is a study of 66 schizophrenic patients followed for 2 years after topectomy. It extends work reported in the 2 previous volumes of the Columbia-Greystone Project. The most original contribution is a study of sexual behavior by Pomeroy of the Institute for Sex Research. "Although individual cases in this study sometimes showed an increase in sexual behavior following any one of a variety of psychosurgical brain operations there was no consistent trend in either direction for the group taken as a whole."

Nor were other aspects of behavior in these patients notably changed by topectomy. In the chapter on psychiatric effects, Hoch and others state: "No undesirable postoperative personality changes were observed in either the improved or unimproved overt schizophrenics." However, these authors go on to say: "These patients were not optimum for evaluation of a possible deleterious effect of operation because of their advanced degree of deterioration."

This understatement gives the clue to the disappointing results of the study as a whole. The patients were too far gone. Except for a small number with pseudoneurotic schizophrenia, 75 percent of the patients selected for operation were noticeably or very markedly deteriorated. Average duration of illness was 10 years and of hospitalization, 7 years. Considering this unwholesome material, it is notable that 8 of the 59 overt schizophrenics (13.6%) were out of the hospital at the end of 2 years. Few of those remaining showed improvement in their behavior. These authors conclude that: "Bilateral frontal topectomy, at the sites (superior and orbital aspects of frontal lobes) and with the quantity of cortex removed (30-35 grams, each side) in this project, has been an inadequate treatment measure for chronic, deteriorated schizophrenics."

In non-deteriorated subjects the value of psychosurgery is recognized: "The surgery need not be viewed as a desperate last resort after all possible measures of doubtful effectiveness or known ineffectiveness have been tried. In the groups of patients who respond well to topectomy (or other psychosurgical procedures less radical than frontal lobotomy), this operation should be employed in preference to frontal lobotomy. An excellent therapeutic response may be obtained without the complication of undesirable personality change."

The 59 chronic patients were independently evaluated by Stanley and associates who from the strictly therapeutic viewpoint give the Scotch verdict of not proven. Ten of these patients suffered from one or more convulsive seizures.

Various other chapters deal with physiologic, vestibular, psychophysiologic, psychometric, social service and autokinetic aspects. Complex mental functions and a time-sampling activity study are presented in some detail. The results would have been more significant in a series of non-deteriorated subjects.

The vast amount of work that went into this project has yielded a small return. The subjects are as lifeless as their key symbols. Nothing has been added that makes for better understanding either of the functions of the frontal lobes or of the genesis of schizophrenia. The failure stems from the sterile material chosen for investigation. With a decade of experience in operating fruitlessly upon chronic deteriorated schizophrenics, the originators of the project might well have chosen material with greater potentialities. That, with the methods employed, would have made interesting reading.

WALTER FREEMAN, M. D.,
Los Altos, Cal.

DRUG ADDICTION IN BRITISH COLUMBIA. Edited by George Stevenson, M. D. (Department of Public Health, University of British Columbia, 1956. pp. 658.)

The University of British Columbia has issued a report of a research survey entitled *Drug Addiction in British Columbia*. The report is in mimeographed form containing 658 pages and 11 appendices.

The study commenced in 1953. One study consisted of an investigation of a group of drug users and non-users at Oakalla Prison Farm. This was followed by a record of every addict coming to the Prison Farm following conviction on any charge. The scope of the research included not only comprehensive and detailed statistical analyses but also psychological and physical examinations of many of the subjects.

The authors state that the study was required to survey all factors, so far as they might be ascertained, which might possibly be contributory to drug addiction in British Columbia. The value of the report is enhanced by the inclusion of a carefully prepared summary of the conclusions and 14 specific recommendations arising out of the research.

The research was subsidized by a grant from the Federal Government.

K. G. GRAY, M. D.,
Toronto Psychiatric Hospital.

STUDENT MENTAL HEALTH: AN ANNOTATED BIBLIOGRAPHY, 1936-1955. By Daniel H. Funkenstein, M. D., and George H. Wilkie, B. A. (London, England: World Federation for Mental Health, 1956.)

This paper-bound book of 279 pages, with a 16 page index, was prepared for an International Conference on Student Mental Health, at Princeton, N. J., Sept. 5-15, 1956. It mentions 1,803 books and articles, giving publishers or journals in which they appeared, with page references, and appears to be as complete as is possible. About one item in 10 has an abstract varying from 4 to 40 lines in length. This will be a valuable work to those dealing with college students, and with adolescents and young adults generally. It is appropriately dedicated

to the memory of Clements C. Fry, "Pioneer for Student Mental Health."

C. G. STODDILL, M. D.,
Toronto, Canada.

BASIC PSYCHOLOGY. By Leonard Carmichael, Secretary of the Smithsonian Institution. (New York: Random House, 1957. \$3.95.)

This book is written by a man of much wisdom. The preface is brief, as all good prefaces are. It tells us that the book "is intended to serve as a nontechnical introduction to the psychology of the normal, adult, civilized person of our time."

The fruits of experience in a remarkable career are brought together here. The author has been a teacher of psychology in half a dozen universities and for 14 years was president of Tufts College. He has served as chairman of various national scientific bodies, and is a former president of the American Psychological Association. As one of his most important assignments he was called upon in World War II to organize and direct the National Roster of Scientific and Specialized Personnel. In 1953 Dr. Carmichael became administrative director of the historic Smithsonian Institution. He is the seventh secretary and the first psychologist to head this great aggregate of art and science organizations and research facilities in Washington.

The fundamental point of view in *Basic Psychology* is biological, with facts derived from other methods of study introduced where they seem relevant. Conspicuous throughout the text is a painstaking avoidance of the smallest dogmatic statement. The data of observation or experiment are succinctly set down; where there is uncertainty, points of view are offered. The author has given us what might be called a common sense psychology rather than a technical treatise of the class room or laboratory, and yet his conclusions are based on laboratory techniques as well as on evidence from all the related social sciences. His book presents the results of his own experimental work, and indicates the inevitable and intimate concern of psychology with every aspect of human behavior, individual and collective. In this latter respect it draws attention to many features of the contemporary scene that the general reader may easily have overlooked. The book is therefore wisely and needfully educational for the light it throws upon human motivation.

Not only the positive but also the negative side of psychic transactions is considered. For example, re "thought transference" the author states: "Such reports, although they may be given in full honesty, are not accepted today by most professional psychologists. This is because, in spite of repeated efforts, no satisfactory scientific proof of thought transference by other means than by the use of man's regular sense organs has been established to the satisfaction of most serious students of mental life. This statement stands in spite of the insistent efforts of certain present-day investigators to give scientific proof of the existence of so-called *extrasensory perception*; that is, perception has not

yet been demonstrated independently of sensory stimulation."

As every one knows, the relationship of psychology to psychiatry has been a subject of debate for many years. Carmichael notes: "The psychologist is interested in mental abnormality for its own sake and also because a knowledge of mental deviations throws much light upon many of the psychological reactions of relatively normal men and women." He mentions the usual ways in which psychologists cooperate in team work with psychiatrists but does not suggest a line of demarcation between the two disciplines in independent practice. He merely records that clinical psychology is "that part of psychology which concerns itself with patients or clients who are mentally ill or who need help in adjusting themselves to their environment."

The author gives extended treatment to the physiological and electrophysiological background of mental activity. It is interesting to record that he and Jasper first duplicated in America the Berger phenomena and in 1935 published the first American paper on the EEG.

Discussing the learning process Dr. Carmichael records that earthworms could be taught to crawl through a T-shaped tube and emerge regularly at the end where presumably comfortable conditions awaited them in preference to the opposite end, where uncomfortable conditions were met with at the exit. Some psychologists, the author states, consider such reactions indicating that a synaptic type of nervous system has been evolved, as "the earliest step in the development of mind." (The gentle Lewis Carroll also experimented with earthworms. He tried in his boyhood to train them to fight one another. He failed. Should the proverb, "Go to the ant . . ." be newly edited?)

In the matter of heredity the author points out that not only physical but also personality characteristics and ways of thinking, feeling, and acting may be passed from parent to child. In many forms of life other than human, the whole behavioral pattern is seen to depend on "the inborn connections of the central nervous system," as in the nest-building of certain tree ants. Again, certain birds, "reared in isolation from the time of hatching, without any opportunity for learning, produce the entire song of the species down to the finest detail." Comparative psychology indicates that "not a little of man's learned behavior is, to a degree all too often forgotten, limited by inborn and hereditary neural patterns." Dogs of different genetic strains, "reared in a constant environment, show inherited 'personality' differences that are more striking in adult life than are the differences noted as puppies. There is no sure reason why this may not also be true of men and women." And in another place: "If physique is inherited and if physique and personality are related there is reason to suppose that the chromosomes may play a part in establishing basic personality structure. The chromosomes rather than social learning alone or 'infantile psychological experiences' may predispose the adult to be gay or morose, energetic or phleg-

nature. . . . In spite of many articles attempting to prove to the contrary, the evidence seems to indicate that *some* of the fundamental psychobiological traits that are basic to the performances measured by intelligence tests are inherited."

There is a good deal too about infant psychology and the earliest springs of behavior. Kant spoke "in somewhat unphilosophical language" of the birth cry as an expression "of indignation and aroused wrath." Most physiological psychologists, however, agree "that the mere sound of the birth cry is non-meaningful." What it does show is "that the anatomical and physiological mechanism of phonation is in working order." The author enlivens his discussion with an occasional humorous touch. He quotes from "a physician of eminence in psychoanalysis in regard to the significance of the birth cry: 'It is an expression of its (the infant's) overwhelming sense of inferiority on thus suddenly being confronted by reality, without ever having had to deal with its problems.'"

In another connection, referring to the Cartesian doctrine that all other animals than man are mere machines, Carmichael quotes Clifton Fadiman in the *New Yorker*:

Said Descartes, "I extoll
Myself because I have a soul
And beasts do not." (Of course
He had to put Decartes before the horse.)

As for the Drives and Motives of Behavior the author humbly admits that, "In comparison to the gifted novelist or dramatist, the psychologist is at a disadvantage when he tries to consider the real motivational machinery of any one civilized normal adult human being."

"Theoretically," the author suggests, "neurology, when considered in a comprehensive way, should provide the true basis for both psychology and psychiatry . . . there could be no normal or abnormal mental life without nerves and brain." And he comments that in practice both disciplines still give too little attention to that fact. "In the future, more than in the past, psychology, physiology, biochemistry, psychiatry and clinical neurology seem bound to advance as closely related fields which are all interested in the bodily basis of behavior."

Dr. Carmichael devotes 10 of his 327 pages to psychoanalytic theory. Concepts such as "libido" and "death instinct" he finds are apt to be regarded by physiologically trained psychologists as "logical constructs" and not as facts of observation," while the "dynamic unconscious" becomes "a series of non-conscious, and ordinarily physiologic events." He suggests that behavior described "in terms of these assumed and constructed entities and forces may better be understood, in terms of

the endocrine balance of the individual, objectively recorded sequences of behavior, and by well-known principles of habit formation." He also states that "new syntheses of psychoanalysis and experimental psychology" are now being attempted by well-trained clinical psychologists.

In a chapter on Value Judgements the author discusses briefly the part that religious attitudes, under given conditions, may play in maintaining ethical standards. However, "a merely intellectualistic argument for the social value of religion does not contribute necessarily to social health."

The present reviewer has read this book carefully and learned much from it. It has been a valuable experience. Only one statement caused him to wonder, even to question. On page 243 we read: "Modern man who is interested both in peace of mind and an achieving life . . . should not too easily be sure that such a good life can be lived by himself or by anyone else except under the guidance of a truly and deeply emotionally accepted religion, which is also intellectually understood." The reviewer ventures to ask whether "emotionally accepted" and "intellectually understood" as used here are compatible terms, and whether the implication of this statement is not at least open to doubt.

The range of this comparatively small volume is as broad as human life and activity. Chapters deal with the application of psychology in economics, business administration, government organization, marketing and advertising, human engineering generally. Commenting on social and political groupings with which man has experimented down the ages the author remarks, "... harsh dictatorships run by a few leaders for their own pleasure, or unreal utopian societies both seem not to be stable because they fly in the face of some of the essentially fixed aspects of human nature."

At the close of his book, Carmichael notes that its subject matter is rapidly expanding. "There is much important research to be done in gaining more adequate understanding of every topic mentioned in this volume." And appreciating the frailties and fallibilities of the human animal, one "never expects the impossible of still only partially socialized organisms that have somehow learned to speak, to think in words and sometimes to dream dreams of a better world for all people everywhere."

"Partially socialized organisms"—perfect characterization of the human race.

For the student and for the general reader who should be acquainted with the basic data of psychology washed clean of metaphysical speculation—and that means all discriminating persons—there can be, in the reviewer's opinion, no better guide than this book.

C. B. F.

IN MEMORIAM

WILLIAM C. SANDY, M. D., 1876-1957

As the hourglass hastens few psychiatrists have the rewarding experience of looking back over a career characterized by distinguished service in more than one branch of their chosen profession. This was the merited privilege of Dr. William Charles Sandy. Dr. Sandy gave generously of himself in the service of organized American psychiatry, but the task which his desire for the greatest possible social usefulness imposed upon him was the improvement of the care and treatment of patients in public mental hospitals. This career, which in a quiet and effective manner, had contributed much more to various fields of psychiatry than Dr. Sandy would have conceded, came to a close at Geneva, N. Y., September 7, 1957.

Dr. Sandy was born in Troy, N. Y., a son of William C. and Eliza Rounsavell Sandy. He prepared for college in the public schools of Newark, N. J., and graduated from Columbia College in 1898. In 1901 he received the degree of Doctor of Medicine from College of Physicians and Surgeons, Columbia University. Following a year's internship at the Newark City Hospital, Newark, N. J., Dr. Sandy was appointed as resident at the Westport Sanitarium, Westport, Conn. He remained at Westport until January, 1905, when he was appointed to the staff of the Kings Park State Hospital, Kings Park, N. Y. In 1915 Dr. Sandy resigned this position to become clinical director of the Columbia, South Carolina State Hospital, under Dr. C. Fred Williams, president of The American Psychiatric Association, 1934-1935. In 1916, during the period of this service, and under the auspices of the National Committee for Mental Hygiene and the Public Charities Association of Pennsylvania, Dr. Sandy surveyed the county institutions for the mentally ill in Pennsylvania. In 1917 he was appointed assistant superintendent of the Connecticut State Hospital, Middletown, where he served for one year when he resigned to accept a commission in the Medical Corps

of the U. S. Army. During most of the period of his service in World War I Dr. Sandy was stationed in the office of the Surgeon General, division of neurology and psychiatry. Following the war he returned to the State of New York and became psychiatrist to the New York State Commission for Mental Defectives (1919-1921).

In 1921, the Pennsylvania state government was re-organized, and Dr. Sandy was appointed as the first Director of the Bureau of Mental Health in the newly created Department of Welfare. The duty of organizing and directing this Bureau, a position which he held for 23 years, rested upon Dr. Sandy. At times, as is frequently the case when authority becomes more centralized, and traditions must be changed in order that greater efficiency and higher standards may be established, Dr. Sandy felt frustrated but his infinite patience and tact enabled him to succeed where others might have failed. Recognizing his unobtrusive efficiency, his devotion to duty and his wise understanding of hospital management, successive Secretaries of Welfare reappointed him as administrations changed. This uninterrupted tenure enabled Dr. Sandy not only to exercise much constructive influence in raising the standards of institutional care and treatment but also to lay the groundwork for a community mental health program. He did much to promote sound legislation in behalf of the mentally ill.

It was upon Dr. Sandy's recommendation and through his efforts that legislative authorization was secured and appropriations made for the construction of the Western State Psychiatric Institute and Clinic, Pittsburgh. Because of his modesty, Dr. Sandy never claimed that he should receive recognition for the conception and construction of this important teaching and research centre, the plans for which were drawn under his instruction. The Institute should, in fact, be regarded as a tribute to his memory.

During his career Dr. Sandy made many contributions to psychiatric literature. In 1939 he was elected to the editorial board of the *American Journal of Psychiatry* and served as associate editor until 1956. His occasional comments over the initials "W. C. S." were always sound and constructive.

In 1933 Dr. Sandy was elected secretary-treasurer of The American Psychiatric Association. In 1938 he was chosen as president-elect, and in 1939 became president of the Association. In his presidential address, "Organization and Administration in Psychiatry," given at the 1940 meeting of the Association, Dr. Sandy commended the constantly increasing contributions to the Association by the various committees. He also re-emphasized the necessity for inspired medical leadership in the person of the mental hospital superintendent, and discussed the

types of state government organization most favorable for the development of such leadership. In 1939 Dr. Sandy was a member of the organization committee of the Pennsylvania Psychiatric Society and was elected first president of the Society.

Following his retirement from the directorship of the Pennsylvania Bureau of Mental Health in 1944, Dr. Sandy resided at Ovid, located on the shore of Lake Cayuga, New York. Here he found a long-desired opportunity for a greater enjoyment of music and for gardening. Many winters were spent at Ithaca.

Dr. Sandy was married to Vida Dowers of Interlaken, N. Y., in 1905. Two children, Elizabeth and William Charles III, were born to Dr. and Mrs. Sandy. Both Mrs. Sandy and the children survive him.

ARTHUR P. NOYES, M. D.,
Norristown, Pa.

CHARM

Charm is the life of natural endowments, the breath of speech, the soul of action, the adornment of adornments themselves. Other gifts are a natural embellishment, but charm is the adornment of perfection itself. It is apparent even in discourse. It is, in the main, a gift; it owes least to study and even rises above discipline; it is more than ease of deportment, and is superior to gallantry; it implies a natural manner and adds the finishing touch; without it all beauty is lifeless and all grace, disgrace; it surpasses courage, discretion, prudence, sovereignty itself. It provides a polite and speedy means to the achievements of one's ends, and an urbane way out of every tight corner.

—BALTASAR GRACIAN
(The Oracle, 1647)

MULTIPLE APPROACHES TO TREATMENT IN SCHIZOPHRENIA AND DISCUSSION OF INDICATIONS¹

LEO ALEXANDER, M.D.,² AND MERRILL MOORE, M.D.³

Schizophrenia is not a disease entity, but a series of clinically fairly characteristic patterns which may be indicative of a variety of reactions and/or disease processes. A fundamental difference between schizophrenic reactions and schizophrenic disease processes has been suspected for a long time, but no one has been able to differentiate the two reliably by objective tests or clinical criteria that are generally accepted at this time.

The basic thesis of this paper is that schizophrenia, like cancer, is not one disease but a multiplicity of disorders, possibly each one with its own chemistry, pathology, psychopathology, and patterns of development and course. This leads to the conclusion that treatment must be tailored to the individual schizophrenic patient. The great variety of benign and malignant forms of schizophrenia require that we define as many objectively verifiable aspects of the disease as possible, and determine the spontaneous recovery potential for all of the resulting sub-groups based on as many objectively measurable variables as are or may become available.

There are a small number of objective criteria presently available both on the psychological level and on the physical level. On the psychological level, Kleist(1) has stressed the importance of disturbance in categorical thinking. Funkenstein and his co-workers(2) determined significant variables derived from alterations of autonomic reactivity, or as Gellhorn(3) put it, of central sympathetic reactivity. Applying these criteria in practice in a population of schizophrenics differentiated by their adrenalin-mecholyl test (Funkenstein test) pattern, one of us(4) found that in an otherwise clinically homogeneous group of schizo-

phrenics, of those showing a test pattern classified as Type VI or VII, 62% recovered, while of those showing a test pattern other than VI or VII, namely I to V, only 33% recovered. The difference in recovery rates between these two groups was significant only at the trend level of confidence ($P=0.08$). The autonomic test pattern offered still more specific degrees of differentiation with respect to favorable response to electroshock. Of the Type VI and VII patients, 75% recovered after electroshock therapy, while of the other types only 19% recovered; the latter figure is equal to the spontaneous recovery rate under conditions of hospitalization without other special treatment (see below).

Recovery, as the term is used in this paper, is defined as social and/or complete recovery, while the lesser grades of improvement short of attaining full social rehabilitation, are included with the unimproved group as the non-recovered group. The reason why the main dividing line has to be made not between unimproved and improved, but instead between mere improvement and actual social recovery is because social recovery is the only grade of improvement that can be objectively ascertained, since it is the level at which the occupational capacity of the patient returns to its pre-illness status. Any degree of improvement short of this cannot be objectively determined, and hence all patients falling short of social recovery have been included in the non-recovered group. The recovered group includes those who have attained social and/or complete recovery. One of us(5) has defined these grades of recovery as follows:

An unimproved patient (therapeutic failure) is one who is either still in the hospital or a home invalid, or one who has been in any one of the other categories before treatment, but who has failed to advance with treatment to a higher grade of improvement. An improved patient is one who has sufficiently improved to be discharged from the hospital or who is no longer a home invalid;

¹ Read at the International Congress of Psychiatry in Zurich, Switzerland, September 1957.

² Director, Neurobiologic Unit, Division of Psychiatric Research, Boston State Hospital, Boston, Mass.

³ Research Associate, Department of Social Relations, Harvard University.

who is capable of meeting some, but not all, requirements of his social and occupational life. A social remission or social recovery describes a patient who has sufficiently improved to resume his social and occupational activities to the full, but who has either failed to achieve insight or still retains some subjective complaints or disturbances in his intimate personal life. Complete recovery denotes the restoration of the mental state of the patient to what he and his relatives agree is his former "own best self," implying that such full recovery is associated with insight as well, although insight may not be entirely lacking in other degrees of improvement.

Funkenstein and Meadows (6) pointed out an interesting relationship between the physical and the psychological test data, namely, that enhanced autonomic reactivity suggestive of increased secretion of norepinephrine, a generally unfavorable prognostic sign, is correlated with disturbance in abstract thinking, while autonomic reactivity suggestive of excessive secretion of epinephrine is correlated with well preserved capacity for abstract thinking. Here two criteria emerge which transcend the general or traditional dividing lines between the various forms of schizophrenia, although some overlap exists, as exemplified, for instance, by the generally well preserved capacity for abstract thinking in paranoids and its severe and early disturbance in hebephrenics. Nonetheless, in the large field of simple schizophrenics, catatonics, and especially pseudoneurotic schizophrenics, both these major types of variants in terms of abstract thinking and autonomic reactivity may be present in otherwise similar clinical states. In order to determine prognosis and indications for specific steps of a therapeutic program, careful study not only of the psychological capacities of the schizophrenic patient, but also of his autonomic reactivity is therefore helpful and necessary.

Among the group of prognostic features, educational background and native intelligence also have a modifying effect upon spontaneous tendency to recovery and on the outcome of treatment. Morgan and Johnson (7) found that 68% of non-recovering males and 70% of non-recovering females had no occupation or were unskilled

laborers. Professional workers were almost nonexistent among the chronic males.

At the other end of the scale of prognosis are the stress-induced schizophrenic episodes. During World War II many soldiers under stress of combat or non-combat strain developed striking and apparently classical schizophrenic pictures. In many instances when they were evacuated to the zone of the interior, they cleared up within 6 weeks to 2 months, and reverted to "normal." The fact remains, however, that in spite of all types of treatment available today many so-called "schizophrenics" do not recover. This fact is of great importance in that it highlights the need for delineating the objective and preferably measurable aspects of this particularly malignant form of the disease.

For large unselected and undifferentiated groups of schizophrenics, the spontaneous recovery potential, that is the capacity to attain complete and/or social recovery on a merely custodial and supportive regimen, appears to be 18.9% (of 11,080 patients) (5).

Marked differences in spontaneous recovery potential are not only manifested by the generally benign course of the stress-induced schizophrenias, *e.g.*, those in the military service, but in the general group of schizophrenias as well. It is quite likely that apart from the well-known disease entity of pseudoneurotic schizophrenia which has on the whole a poor spontaneous recovery potential, there are probably such illnesses as pseudoschizophrenic neurosis and pseudoschizophrenic psychopathy, apart from other schizo-affective reactions. The pseudoschizophrenic neuroses, especially if they occur in highly intelligent adolescents, have a particularly favorable prognosis for treatment by psychotherapy. In large unselected groups of schizophrenics, however, intensive psychotherapy alone does not increase the recovery potential over that prevalent spontaneously (it was 18.3% of 1,463 patients), but improves the quality of recovery in that 10.6% of 847 patients achieved the status of complete recovery as compared to 5% of 1,070 patients in the control group. This difference is significant at better than the .01 level of confidence (5).

Schizophrenic patients showing an adrenalin-mecholyl test pattern similar to that of

depressives (adequate response to adrenalin, enhanced muscarinic-hypotensive response to mecholyl) may be classified as pseudoschizophrenic depressions. As stated above, they tend to respond favorably to electroshock—67% achieving complete and/or social recovery—while of the others only 19% recovered; the recovery rate of unselected groups of schizophrenics treated with electroshock being 29.1% (of 7,357 cases) (5).

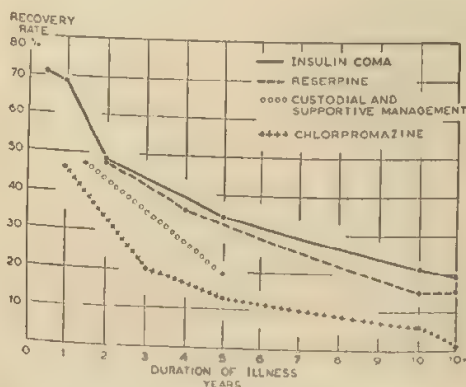
Patients with epinephrine precipitable anxiety do better with insulin (86% vs. 25%) and with the new tranquilizing drugs (chlorpromazine, reserpine, meprobamate) than patients free from epinephrine precipitable anxiety. The over-all recovery rates are: 47.8% (of 7,722 patients) for insulin coma therapy, 34% (of 1,512 patients) for chlorpromazine, 22% (of 897 patients) for reserpine (8). Frontal lobotomy allowed 18% of a particular treatment-resistant group of 1,211 patients to achieve complete and/or social recovery (9, 10, 11, 8). The significance of these data in making treatment plans for specific groups of schizophrenics differentiated by clinical findings and autonomic test findings has to be further evaluated in the light of the influence of duration of illness upon outcome. (Figure 1.)

The spontaneous recovery rate for schizophrenic patients, on a regimen of custodial and supportive treatment, was 47% for 1,445 patients who had been ill only one to 18 months, while it was 18.2% for 834 pa-

tients ill longer than 18 months. For insulin coma therapy the recovery rates declined more steeply; they were 71.3% for 335 patients ill one to 6 months, 67.9% for 339 patients sick for 6 months to one year, 47.2% for 265 patients ill for one to 2 years, 34.4% for 581 patients ill 2 to 5 years, 21.1% for 147 patients ill 5 to 10 years, and 17.7% for 34 patients ill more than 10 years (5). For chlorpromazine therapy, hospital discharge rates were 46% for 516 patients in hospital for one year, 20% for 233 patients in hospital for one to 3 years, 13% for 202 patients in hospital for 3 to 5 years, 6% for 339 patients in hospital 5 to 10 years, and 1% for 233 patients in hospital more than 10 years (12). For reserpine, Kline (13) reported differential rates for attainment of the status "adjudged adequate for release from hospital" for a total of 150 cases, the rates being 46.7% for 15 patients ill less than 2 years, 36.4% for 22 patients ill 2 to 4 years, 15.2% for 59 patients ill 4 to 10 years, and 14.8% for 54 patients ill longer than 10 years.

RECOMMENDATIONS FOR TREATMENT

The Treatment Plan.—It is our general procedure to start treatment of our patients with a brief trial on drug therapy, at the same time establishing supportive psychotherapeutic rapport. For patients with a depressive type of adrenalin-mecholyl test response (Types VI and VII), we recommend meprobamate in combination with benactyzine (400 to 1200 mgm of meprobamate combined with 1 to 3 mgm of benactyzine, 3 to 4 times daily); for the others, chlorpromazine (25 to 250 mgm 3 to 4 times daily), Compazine (5 to 10 mgm 3 to 4 times daily) or reserpine (3 to 13 mgm daily). The latter may be particularly helpful in Type V patients free from epinephrine-precipitable anxiety. If some improvement should not be noticeable within 2 weeks, or marked improvement be forthcoming within 6 weeks, drug therapy should be discontinued temporarily and electroshock or insulin coma therapy be instituted. The reason for this recommendation is the fact that the time differential for successful shock or coma therapy is the most critical (see above Figure 1); hence it is our opinion that as



RECOVERY RATE AS A FUNCTION OF DURATION OF ILLNESS SEPARATELY FOR SPONTANEOUS RECOVERY ON CUSTODIAL AND SUPPORTIVE MANAGEMENT, INSULIN COMA THERAPY, RESERPINE TREATMENT AND CHLORPROMAZINE TREATMENT.

FIG. 1

soon as it is established that the patient does not belong to the group most likely to benefit significantly from drug therapy, his chances to benefit from shock or coma therapy should not be reduced by further delay.

Throughout the physical treatment program, from the initial phase of drug therapy onward, psychotherapy should be utilized in establishing good rapport, reinforcing all gains achieved through physical treatment methods by means of interpretation, persuasion and suggestion, and assisting the patient vigorously in reality testing. While it is always gratifying to see patients recover after the first or second phase, for instance, drug or electroshock therapy, the important thing is not to give up but continue with intensive treatment, yet not to pursue any one form of treatment for too long after it has proven ineffective.

The second step in our approach is electroshock therapy. We recommend a course of about 20 convulsive electroshock treatments, particularly in the presence of a favorable adrenalin-mecholyl test response (Types VI or VII). In these cases we prefer the use of maximal amounts of alternating current (14); in the others (Types I to IV), combined convulsive-nonconvulsive treatment with the use of unidirectional current (Reiter type) (15) or alternating current (electro-narcosis type) (16), are preferable. Type V patients are unresponsive to all electrical forms of treatment; these patients should be treated by insulin coma therapy, after reserpine should have failed to bring about recovery. During the convalescent phase, tranquilizing drugs (chlorpromazine or compazine) or relaxant drugs (meprobamate) should be utilized, in conjunction with psychotherapy, until recovery appears complete.

If electroshock treatment should fail, or fall short of social recovery, or if the patient should relapse within less than 3 months, we proceed with the third phase of treatment, consisting of 60 deep insulin comas. (Sometimes we start with insulin coma therapy earlier, instead of or simultaneously with electroshock therapy, especially with patients having adrenalin-mecholyl test patterns other than Type VI or VII).

If insulin coma therapy should fail, or fall short of social recovery, or if relapse

should take place within less than 6 months, intensive tranquilizing drug therapy (chlorpromazine or reserpine) combined with psychotherapy should be initiated and energetically pursued.

It is often difficult to decide when this fourth phase of treatment should be adjudged a failure; but in general, when such patients fail to respond within a year, frontal lobotomy should be considered. But it is of interest that with persistence one can get a significant number of such patients well with methods short of lobotomy. We should like to give a brief example:

A paranoid schizophrenic female patient, aged 43, finally achieved full recovery with insight after 5 years of almost continuous treatment which included 60 deep insulin comas, 63 convulsive electroshock treatments administered in 3 series, and a good deal of chlorpromazine and psychotherapy. At one impasse we had recommended lobotomy, but the family refused and we kept on treating her with electroshock (when she relapsed on chlorpromazine) and subsequently again with chlorpromazine during the convalescent phase, eventuating in a superb result, sustained by continuous administration of a maintenance dose of chlorpromazine (50 mgm 3 times daily).

It is our considered opinion, however, that frontal lobotomy should not be withheld when all the treatments outlined above have failed. Of 8 such patients who had failed on all treatments, including tranquilizing drug therapy, the operation resulted in a complete and/or social recovery in 4 of them (17), 3 achieving improvement short of social recovery, two of these being able to live quiet unruffled lives at home, the third showing marked in-hospital improvement on working-patient status with off-grounds privileges. One patient remains unimproved.

In the light of our experience we should like to make a few additional practical recommendations:

For patients in a public hospital setting we should like to recommend that one senior physician be selected as the patient's personal therapist who would be able to carry the patient through the various phases of treatment. We do not believe that many patients are able to form meaningful relationships with a series of junior physicians in the course of the normal turnover of ward physicians. As the main psychotherapeutic elements, we recommend support, suggestion

and vigorous aid in reality testing, as well as constructive interpretation and explanation of the physical treatment procedures to be undertaken.

While outpatient treatment is often preferable for the less severely sick patients, dependent on the cooperation and insight of the patients' relatives, it is almost always preferable to treat severely sick patients under conditions of hospitalization, at least until they shall have made a good deal of progress. Exposure to the usual vexations, distractions, inevitable interpersonal tensions and uncontrollable adverse suggestive influences of extramural life may precipitate exacerbation and is bound to interfere with treatment. The wholesome suggestive influence which the therapist can exert in the direction of health and acceptance of reality must not be disturbed by outside influences. This can best be accomplished in the hospital. Also, whenever compulsive drinking or abuse of drugs complicates the picture, these completely exclude the possibility of successful outpatient treatment.

It is often desirable that patients remain in hospital and not be discharged until recovery appears complete and shall have become consolidated throughout a sufficient period of observation and testing. There is nothing more disturbing, both to the patient and to the family, than to discharge from the hospital a half-cured patient suffering from paranoid schizophrenia, for instance. The mental health of such a patient's pre-adolescent children may be seriously disturbed by the parent's premature discharge.

In general it should be assumed that a schizophrenic patient's intensive treatment will require at least one, probably several years.

SUMMARY

1. Schizophrenia is a disease of unknown etiology. It appears to be multifactorial in origin, and may represent a group of diseases with similarity in clinical mental symptomatology, but with a wide range in prognosis.

2. The great variety of benign and malignant forms of schizophrenia require that we define as many objectively verifiable aspects of the disease as possible, and determine the spontaneous recovery potential for all of the

resulting subgroups based on as many objectively measurable variables as are or may become available.

3. Variables affecting prognosis favorably are: recent onset, high intelligence, relatively unimpaired capacity for abstract categorical thinking, good educational background, better than average occupational status, stress-induced onset, and autonomic reaction pattern (adrenalin-mecholyl test pattern) similar to that of depressions.

4. Apparently schizophrenic illnesses in highly intelligent adolescents (pseudoschizophrenic neuroses) respond well to psychotherapy.

5. Schizophrenic patients showing an adrenalin-mecholyl test pattern similar to that of depressions respond well to electroshock therapy.

6. Patients with epinephrine-precipitable anxiety do better with insulin and the new drugs.

7. Response to all types of treatment declines with duration of illness, most markedly for the shock and coma therapies, somewhat less for the drug therapies and for psychotherapy, least for frontal lobotomy.

8. Recovery rates (complete and/or social recovery) obtained spontaneously as well as on various treatment regimens (intensive psychotherapy, electroshock therapy, insulin coma therapy, tranquilizing drug therapy and frontal lobotomy) at the various levels of duration of illness are given.

9. A practical treatment program is formulated based on the findings presented.

BIBLIOGRAPHY

1. Kleist, K.: *Allg. Zschr. f. Psychiat.*, **82**: 1, 1925.
2. Funkenstein, D. H., Greenblatt, M., and Solomon, H. C.: *Psychosom. Med.*, **14**: 347, 1952.
3. Gellhorn, E.: *Physiologic Foundations of Neurology and Psychiatry*, Minneapolis: University of Minnesota Press, 1953.
4. Alexander, L.: *Arch. Neurol. and Psychiat.* (Chicago), **73**: 496, 1955.
5. Alexander, L.: *Treatment of Mental Disorder*. Philadelphia and London: W. B. Saunders Co., 1953.
6. Funkenstein, D. H., and Meadow, A.: The Relationship of Abstract Thinking to the Automatic Nervous System in Schizophrenia. In: Hoch, P. H. and Zubin, J. (Eds.): *Relation of Psycho-*

logical Tests to Psychiatry. New York: Grune & Stratton, 1952.

7. Morgan, N. C., and Johnson, N. A.: *Am. J. Psychiat.*, **113**:824, 1957.

8. Freeman, H.: *N. E. Journ. Medicine*, **255**:877, 1956.

9. Freeman, W., and Watts, J. W.: *Psychosurgery in the Treatment of Mental Disorders and Intractable Pain*. p. 491. Second ed. Springfield, Illinois: Thomas, 1950.

10. Freeman, W.: *Am. J. Psychiat.*, **113**:877, 1957.

11. Greenblatt, M., Arnot, R., and Solomon, H. C.: *Studies in Lobotomy*, New York: Grune, 1950.

12. Denber, H. C. B., and Bird, E. G.: *Am. J. Psychiat.*, **113**:972, 1957.

13. Kline, N. S.: *Clinical Applications of Reserpine*. In: Kline, N. S., ed.: *Psychopharmacology*. Publ. No. 42, Amer. Assoc. Advanc. Science, Washington, D. C., 1956.

14. Alexander, L.: *Med. Clinics of North America*, **38**:1363, 1954.

15. Friedman, E., Wilcox, P. H., and Reiter, R. M.: *J. Nerv. & Ment. Dis.*, **96**:56, 1942.

16. Tietz, E. B., *et al.*: *Am. J. Psychiat.*, **101**:821, 1945.

17. Alexander, L.: *Objective Approaches to Treatment in Psychiatry*. Charles C Thomas, (In press), 1957.

THE PRISON CODE

PAUL R. MILLER, M.D.¹

THE PRISON CODE

The prison code is a group of positive and negative sanctions which apply to the behavior of an inmate population in a prison; it defines and limits the actions of the inmate as an individual and as a member of the inmate group in his relations with other prisoners and with the prison personnel. The inmates themselves create the prison code to satisfy certain of their needs which are both characteristic of and unique to their group. The code operates outside of (and usually in disregard of) the regular institutional rules. Neither the inmates nor the personnel explicitly verbalize or specifically recognize all the functions of the code; however, prison society is obviously quite different from the non-criminal society of free men which surrounds it, and the prison code illustrates much of this difference.

THE INMATE AS AN INDIVIDUAL

An analysis of this social group will begin with an analysis of its individual members. However heterogeneous in terms of personality the inmates might appear, they have manifested at least 2 important common denominators of observable behavior: 1. each has committed a serious antisocial act, a felony, 2. each has been apprehended and convicted for his act. The first characteristic indicates that irrespective of the basic personality type these individuals all act out their aggressive hostile impulses in a predatory antisocial manner; they transform their fantasy into motor behavior without an inner ability to control it. When they come together in prison, these same elements of acting out behavior, aggressiveness, hostility, impulsiveness, and predatory antisociality appear in their group activities and social structure. The second characteristic might not be considered significant until one realizes that only 12.5% of all major crimes are solved(1). Expert detection leads to some of these solutions, but quite often the individual himself

makes some contribution to his own apprehension, as evidenced by the large proportion of incarcerated inmates who gave themselves up (or else planted a clue while committing their crime which obviously identified them), pleaded guilty at their trial, and now admit (if not boast of) their crimes. The implications are too numerous and complex to discuss here(2); suffice to say that operationally these inmates (particularly the recidivists) deliberately invite hostility and aggression toward themselves as well as restriction of their personal freedom; this they find in prison. If this observation is valid, it then follows that the prospect of punishment actually invites rather than deters antisocial acts by these deviant personalities (whether in or out of prison).

Clinical psychiatric evaluation reveals at least 2 other qualities which are found in an overwhelming majority of inmates and manifested in their social group activity of the prison code. Most striking is their inability to form interpersonal relationships on a basis of mutual trust and faith, through which most people fulfill their interpersonal needs. This lack is also apparent in the prison code, as inmates relate to one another with distrust and suspicion. Secondly, they display little prospective insight and anxiety; thus they think only of immediate satisfactions and not of future consequences.

NEEDS WHICH THE CODE TENDS TO SATISFY

To summarize the preceding section, the majority of inmates have needs to act out impulsively with aggression and hostility and to prey upon the weak or unprotected. They manifest a need for restrictions and punishment (administered in a form which they can interpret as unjust retribution). They have little trust or faith in their fellows, and they do not consider the possible consequences of their behavior.

To account for this behavior one might begin by hypothesizing that the individual inmate is the result of his previous total life experience, epitomized by the term rejection. Irrespective of the intentions of the prison

¹ Michael Reese Hospital, 29th and Ellis Sts., Chicago, Ill.

personnel to provide humane treatment and opportunities for self-betterment, the inmate often interprets his prison experience as the most recent and most severe rejection in his lifelong series of rejections. Therefore, he will use the prison code to reject his immediate supposed rejector, the prison official.

OPERATION OF THE CODE

A fundamental and unique characteristic of the inmate society is the almost total absence of physical or psychological escape routes from it. The absence of physical escape routes is the result of the structure of the prison, the prison rules which are designed to regulate the inmates' physical movements, and the custodians who are employed to enforce the rules. As a result the prisoner has no choice but to live in the social and psychological confinement of the inmate society, whose rules of behavior are much more rigid and constricting than are the institutional regulations. This is reminiscent of the inductee in Navy boot training, who is advised to "shape up or ship out; and nobody's leaving."

The possession of power is both the dominant value and the means of coercion in the prison code. The basic form of power is physical strength; secondary forms include institutional information (pilfered from files), ability to obtain special favors from officials, or materials not usually allowed (such as homebrew, or extra food stolen from the kitchen). The inmate or inmate group possessing the most power will dominate its own sphere of living and work; the result is that the strong prey upon the weak. Rigid hierarchies exist, and any situation which threatens the established "pecking order" must be resolved immediately and overtly; neither equality nor a standoff is tolerable. Adherence to the code varies directly with the antisociality, hostility, etc., of the individual inmates comprising the group.

No formal structure of laws exists. Rather, judgments concerning deviancy are made impulsively with each new case, depending upon the whims of the leaders who serve as juror, judge, and executioner. Punishment takes the form of physical brutality or fines (paid with either special favors or materials).

The prison code tends to be most satisfying to those with deviant character disorders prior to their incarceration. Those individuals who still share basic values with the non-criminal society of the outside have most difficulty adjusting in prison; for they have not yet rejected society or themselves to the point of having to develop antisocial traits.

The criminal repeatedly demonstrates his inability to handle freedom; he lives in society only a short time before he commits another felony and returns to prison. While in prison he forms a code which limits his choices and inherently prevents group democratic decisions, because the chaos which results prompts the officials to write rules covering the situation.

ROLE OF THE CUSTODIAN

The dormitory and work supervisors who have a daily face-to-face contact with the inmates are the primary representatives of free society. Since their fundamental responsibility is to maintain the custody of the prison, they are concerned with inmate discipline and compliance. Because many inmates choose to regard the custodian as the most recent of their rejectors and so relate to him in a hostile uncooperative manner, some custodians will assume the role actively.

One reason why custodians may accept and work within the prison code is that it seems to make their job easier. If special privileges are granted to the strongest inmates who enforce the code, those inmates ostensibly cooperate by obeying the institutional rules and forcing weaker inmates to comply also. Thus, the ward seems to run smoothly and quietly, and the custodian has less work to do as he no longer has to enforce discipline or mete out punishment.

THE PROFESSIONAL STAFF WORKER

The active resocializing and rehabilitative responsibilities have been delegated in most prisons to a professional group which includes physicians (especially psychiatrists), parole officers, educators, chaplains, and classification experts. Introduced as a part of the humanitarian reform begun some 50 years ago in prisons, they have contributed significantly to that program. However, neither the program nor the professionals have made much difference in the

resocializing aspects of prisons; for the facts indicate that rates of recidivism are substantially the same as they were 50 years ago and similar for similar prisons irrespective of their professional staff (3).

If humanity, in the form of material necessities, medical and spiritual care, education, etc., is not the total answer in rehabilitation, what is? We do not know the total answer. However, we do know that humanity is a necessary beginning. We also know that the prison code must be eliminated or controlled, because it has an ultimate deleterious effect upon all participants. It places the control and maintenance of the total milieu, which is probably the most important aspect of a rehabilitative process, in the hands of the most manipulative predatory inmates. The psychiatrist who attempts to treat inmates for their mental illness (and antisociality) soon finds himself in an untenable position: he recognizes the malignant aspects of the prison code which prevent therapeutic resocialization; but if he attempts to regulate and structure the milieu, the inmates correctly recognize this as an attack upon their society and regard the psychiatrist as a threat to their mode of existence.

SUMMARY AND CONCLUSION

It is clear that an inmate population which uses the prison code as a part of its social structure is not easily resocialized. To eliminate the code is possible only if the needs which the code satisfies are fulfilled by other means or replaced.

All prison personnel should avoid participating in or condoning the prison code. Rather, they should attempt to show the inmate that he can best attain his goals by cooperating with the official program rather than living by the code; this could be initiated in an orientation unit. Each new inmate should be classified by a multidisciplinary team (representing each aspect of the professional and custodial staff) according to his resocialization potential. Our experience has shown the following criteria to be most valuable: age and recidivism (both negative correlations), basic personality pattern (neurotics are most treatable, psychotics and character disorders less so), and the drive toward mental health (using observed be-

havior rather than the inmate's verbalizations). Those who are "prison-wise" or "institutionalized" should be segregated in their housing and their work.

Certain mental hospital practices can be incorporated into the management of prisons: 1. personality change should be directed toward resocialization, not just institutional conformity; 2. freedom of movement and choice should be allowed to the practical limit of custodial security; 3. a job commensurate with his level of ability and aspiration should be available to each inmate; 4. suitable living quarters should be available, using the criteria of age and treatability; 5. interpersonal relations between officials and inmates should be structured to decrease hostility, inspire a sense of personal confidence and mutual trust, and elevate self-esteem; 6. short term satisfactions and long term goals should be allowed and encouraged.

To operate such a program it is necessary to enlist the help of all personnel. One group found that their staff "would do a better job in the interests of our new therapeutic approach if they felt a sense of involvement in our goals and if their statuses were not called into question by the reorganization (4).

The prison code is the epitome of the destructive anti-rehabilitative elements of most prison societies. The roles of the custodian and the professional worker have been noted. Cooperation between these two groups is essential, because both control and treatment are necessary in the resocialization of inmates. In fact, a well-controlled prison setting may actually provide a milieu for the treatment of some deviant personalities which is potentially more effective than outpatient care or the minimal custody of a mental hospital (5).

BIBLIOGRAPHY

1. Scudder, Kenyon J. *Federal Probation*, 18: 32, March, 1954.
2. See the following: Lindner, Robert. J. of *Social Therapy*, 1: 160, Oct., 1955. Bergler, Edmund. *The Battle of the Conscience*. Washington: Washington Institute of Medicine, 1949.
3. McCorkle, Lloyd W., and Korn, Richard. *Ann. of the Amer. Academy of Pol. and Soc. Science*, 293: 88, May, 1954.
4. Cummings, Liane, et al. *Psychiatry*, 19: 249, Aug., 1956.
5. Howard, H. S. *Delaware State Medical Journal*, 25: 203, Aug., 1953.

REVIEW OF PSYCHIATRIC PROGRESS 1957

HEREDITY AND EUGENICS

FRANZ J. KALLMANN, M.D.¹

To a chronicler long familiar with lean-year advances in medical (psychiatric) genetics, the past year² seemed to mark the long-awaited turn toward full recognition of genetic phenomena in the medical specialties, including psychiatry and neurology. The impetus for this change in attitude, as reflected in a gradual convergence of psychodynamic and physiodynamic theories of health and behavior (1-7), came from two provocative developments in the biological sciences. First was the discovery that the specificity of a vast number of hematologic, metabolic and behavioral functions in man could be shown to depend on the properties and actions of genic elements (8-18). Second was the worldwide attention focused on the health hazards of nuclear radiation.

Cautioned by the stark tenor of several national committee reports (19-22), medical men everywhere appeared to realize that human exposure to ionizing radiation called for reduction to the lowest practical level. Estimates of the safely allowable maximum dosage per individual during the first 30 years of life varied from 4.6 to 10 roentgens (23, 19). The possible consequences of an increased mutation rate in human populations were thoroughly reviewed by Crow (25) and Wendt (26, 27), while the difficulties encountered in direct studies of the genetic effects of exposure to nuclear radiation (as observed at Hiroshima and Nagasaki) were carefully evaluated by Neel and Schull (24). The immediate physical concomitants of fallout radiation damage were described by Conard, *et al.* (28) in Marshallese children examined two years after exposure. There was a mean deficiency of 5.33 cm in height and 3.4 kg. in weight, but only in irradiated boys and not in girls.

With man's survival hinging on optimum

use of his knowledge about the biological and social aspects of evolution, adaptedness and selection, the duty of the scientist to accept the role of leader in the areas of public health and population growth was eloquently expressed by Burnet (29), Gedda (30), Glass (31), Herrick (32), Muller (33), Newcombe (34) and other experts in the biological sciences. Particularly impressive was Muller's prediction that "mankind can increasingly avoid the missteps of blind nature, circumvent her cruelties, reform our own natures, and enhance our own values." His belief was based on the premise that the psychological characteristics most responsible for putting the human species into its present dominant position are those making for intelligence and those making for cooperative behavior. Muller concluded, therefore, that these functions will continue to provide the most important means of meeting the evolutionary tests of survival and extension.

On the didactic side, the rapidly growing literature on basic principles of heredity and evolution was augmented by a number of pertinent books, including those by Bates and Humphrey (35), Dodson (36), Kempthorne (37), Moore (38), Swanson (39) and Winchester (40). There were also numerous monographs of more specialized genetic interest, such as those by Alström and Olson on "heredo-retinopathia congenitalis" (41), by Crowe, *et al.*, on multiple neurofibromatosis (42), by Hallgren on enuresis (43), by McKusick on connective tissue disorders (44) and by Sjögren and Larson on oligophrenia in combination with congenital ichthyosis and spastic disorders (45).

The genetic aspects of aging and longevity were discussed by this reviewer in three different symposia (46-48), and those of neoplastic disease by various panels of experts at the Third Medical Arts Congress in Turin (49) and at two conferences of the New York Academy of Sciences (50, 51). Findings of apparently significant variations in

¹ 722 West 168th St., New York 32, N.Y.

² Grateful acknowledgment is hereby made of the help rendered by Dr. A. R. Kaplan in sorting out the extensive bibliographic material for this review.

the distribution of the ABO blood groups in patients with peptic ulcer, gastric carcinoma and pernicious anemia were reported especially by Buckwalter's research group(52), while the equally important problems connected with the detection of heterozygotes, linkage phenomena and mutation rate estimates were investigated by Hsia(53) and Pfändler(54), Howells and Slowey(55), and Kishimoto(56) and Vogel(57), respectively. Conveying the extraordinary diversity and scope of the contributions that genetics can make in all fields of medicine and allied human sciences, one of the most impressive publications of the past year consisted of the five volumes covering the proceedings of the First International Congress of Human Genetics(58).

The ideological effect of this trend on psychiatric theory was unmistakable, both here and abroad. Indeed, there were few meetings in this country where the possible etiologic significance of gene-specific background factors in mental disorders was not considered. The evidence was equally clear at some of the international gatherings, notably the Second International Congress for Psychiatry in Zurich (September 1-7) and the Anglo-American Symposium in London (September 10-11). Recent developments in psychiatric genetics were reviewed in some detail at a special symposium of the Eastern Psychiatric Research Association(6), with Allen (genetics of mental deficiency), Hirsch (behavior genetics), Kallmann (psychogenetic twin data) and Scheinberg (hereditary defects in protein synthesis) participating. On this occasion, the first R. Thornton Wilson Prize (Genetic or Preventive Psychiatry) was awarded to F. Herbert Scheinberg for outstanding genetic-biochemical research in Wilson's disease.

The central theme of Scheinberg's address (6) was that the production of each protein is controlled by a specific gene and therefore lends itself to identification by modern fractionation procedures(59, 60). Essentially the same hypothesis was applied to the gene-specific etiology of schizophrenia by Fabing(10), various speakers at the Zurich Congress, and this reviewer(5, 6).

Allen's report on the genetics of mental deficiency(6) emphasized that, with the "norm

of reaction" in familial mental deficiency defining the interaction of heredity and environment, heredity does not limit a trait such as intelligence by imposing a ceiling. Rather, it determines for each individual a unique distribution of potentialities in which the central values correspond to the most probable environments. Of the other three types of mental defect considered genetically distinguishable, phenylketonuria was used to illustrate the inborn errors of metabolism, and multiple neurofibromatosis (dominant defect with variable expression, occurring frequently as a new mutation) as representative of the familial morphological syndromes that defy biochemical analysis but lend themselves to population studies. The hypothesis proposed with respect to mongolism as the prototype of the third group (where heredity's role is still "obscure") was that of "a genetic mechanism something like that of Rh-erythroblastosis."

Equally daring was Allen's theory(1) concerning other forms of human psychopathology: incomplete genetic stabilization resulting from the fact that phylogenetically the brain is one of the newest structures and is probably still in the process of rapid biological evolution. Since natural selection had more opportunity to develop stabilizing genetic mechanisms (a kind of genetic homeostasis) in older structures, genetic control of brain development and function, and associated physiological adaptations, was regarded as hardly being able to approach the adequacy of genic control in other systems. In fact, it was hypothesized that many of the genetic variations in the human nervous system were likely to be extreme. In Allen's opinion, it might take "several million years of natural selection in a constantly changing social environment" to consolidate recent evolutionary advances in man's nervous system and behavior.

Progress made in other sectors during the year was expedited by refined cytogenetic techniques. For instance, chromosomal sex identification as inferred from cytologic tests (two X chromosomes in the nuclei of female or chromatin-positive cells, one X chromosome in male or chromatin-negative cells) helped materially in the differential sex diagnosis of congenital errors of sex de-

velopment. Lenz(61, 62) used blood smears (leukocytes) in patients with Turner's syndrome; he also recommended color vision tests (red-green) in the presence of testicular feminization. Bohle and Heinz(63) described the usefulness of placental specimens, and Plunkett and Barr(64-66) observed chromatin-positive nuclei with two X chromosomes (skin, oral mucosa, Leydig cells of the testes) in two cases of testicular dysgenesis. Normal male chromosome patterns were found by Pare(67) in male homosexuals, while the advisability of distinguishing three types of gonadal dysgenesis was postulated by Witschi, *et al.*(68). Further cytogenetic data were reported by Beattie(69), Reitalu(70) and Taillard and Prader(71). Parenthetically, it may be mentioned that the available evidence for a completely Y-borne type of sex-linked trait was questioned by Stern(72) and Penrose(73), and that for the fertility-reducing effectiveness of Hesperidin by Lüers, *et al.*(74).

Valuable contributions to the literature on twins were made by Vogel(75) and Vogel and Wendt(76) on EEG patterns and anthropologic indices; Kaij(77) on drinking habits; Baroff(78) on the measurement of Bender-Gestalt visuo-motor function in mental deficiency; and Eysenck(79) on genetic components in intelligence, extraversion-introversion and autonomic activity. General methodologic problems in the use of twin studies were discussed by Huizinga(80), Lamy(81), Waardenburg(82) and Walker(83).

Also of practical genetic interest were reports by Johnson and Peters(84) on malignant lymphomas in four siblings; Nicholson and Keay(85) on an opposite-sex pair of twins concordant as to mongolism; Branger(86) on nine cases of paralysis agitans in four generations of a Swiss family; and Kozinn, *et al.*(87) on the diagnostic and eugenic problems encountered in families with Tay-Sachs disease. The list of other conditions in which methods of genetic analysis were profitably applied included cerebellar ataxia(88), tuberous sclerosis(89) and Wilson's disease(90).

In the field of eugenics, the symposium on genetic counseling procedures held by the American Eugenics Society (New York

City, November 1) proved to be a timely and well-received event. Participating as panel speakers were Dice, Fraser, Herndon, Neel, Reed and this reviewer. At other conferences, the need for improved methods of family planning was emphasized by Guttmacher(91) and Kishimoto(92). Strong evidence for causal relations between inbreeding and subnormal human health was presented by Böök(93) and Slatis and Reis(94).

BIBLIOGRAPHY

1. Allen, G.: Genetic aspects of mental disorder. In *The Nature and Transmission of the Genetic and Cultural Characteristics of Human Populations*. New York: Proc. 1956 Ann. Conf. Milbank Memorial Fund, 1957.
2. Braceland, F. J.: *Am. J. Psychiat.*, **114**:1, 1957.
3. David, H. P., and v. Bracken, H.: *Perspectives in Personality Theory*. New York: Basic Books, 1957.
4. Gerard, R. W.: *Science*, **125**:429, 1957.
5. Kallmann, F. J.: The use of genetics in psychiatry. In *Anglo-Amer. Symp. of Roy. Soc. Med. and Roy. Medico-Psychol. Assn.*, London: In press, 1957.
6. Symp. on Progress in Genetic Psychiatry. New York: East. Psychiat. Res. Assn., In press, 1957.
7. Kruse, H. D. (ed.): *Integrating the Approaches to Mental Disease*. New York: Hoeber, 1957.
8. Beadle, G. W.: *Science*, **125**:9, 1957.
9. Daigliesh, C. E.: *Ibid.*, **125**:271, 1957.
10. Fabing, H. D.: Biochemistry in schizophrenia. In *Anglo-Amer. Symp. of Roy. Soc. Med. and Roy. Medico-Psychol. Assn.*, London, In press, 1957.
11. Graff, S. (ed.): *Essays in Biochemistry*. New York: Wiley, 1956.
12. Grenell, R. G., and Mullins, L. J.: Molecular Structure and Functional Activity of Nerve Cells. Washington: A.I.B.S., Pub. No. 1, 1956.
13. McElroy, W. D., and Glass, B. (eds): *A Symposium on the Chemical Basis of Heredity*. Baltimore: Johns Hopkins Press, 1957.
14. Nachtsheim, H.: *Acta Genet.*, **6**:223, 1956.
15. Pauling, L., and Itano, H. A. (eds): *Molecular Structure and Biological Specificity*. Washington: A.I.B.S., Pub. No. 2, 1957.
16. Snyder, L. H., and David, P. R.: *The Principles of Heredity*, 5th ed. Boston: Heath, 1957.
17. Kreeh, D.: Behavior genetics and biochemistry. In *Symp. on Behavior Genetics and Differential Psychology (Am. Psychol.*, **12**:453). In press, 1957.
18. Williams, R. J.: *Biochemical Individuality*. New York: Wiley, 1956.
19. Committee on Genetic Effects of Atomic

Radiation. The Biological Effects of Atomic Radiation. Washington: 1956.

20. Medical Research Council. The Hazards to Man of Nuclear and Allied Radiation. London: Her Majesty's Stationery Office, 1956.

21. Newcombe, H. B., *et al.*: Research and Development Report. Atomic Energy of Canada, Chalk River Project, 1956.

22. Comité Scientifique pour l'Etude des Effets des Radiations Ionisantes, Institué par l'Assemblée Générale des Nations Unies. *J. Génét. hum.*, 6: 70, 1957.

23. Glass, B.: *Am. J. Roentg.*, 78: In press, 1957.

24. Neel, J. V., and Schull, W. J., *et al.*: (Atomic Bomb Casualty Commission, Hiroshima, Japan). The Effect of Exposure to the Atomic Bombs on Pregnancy Termination in Hiroshima and Nagasaki. Washington: N.A.S.—N.R.C., Pub. No. 461, 1956.

25. Crow, J. F. *Eugen. Quart.*, 4: 67, 1957.

26. Wendt, G. G.: *Atompraxis*, 2: 135, 1956.

27. Wendt, G. G.: *Deut. Med. Wschr.*, 81: 1397, 1956.

28. Conard, R. A., *et al.*: *J.A.M.A.*, 164: 1192, 1957.

29. Burnet, M.: *Eugen. Rev.*, 49: 127, 1957.

30. Gedda, L.: *Acta Genet.*, 7: 80, 1957.

31. Glass, B.: The Responsibilities of Biologists. *A.I.B.S. Bul.*, 7: 44, In press, 1957.

32. Herrick, C. J.: The Evolution of Human Nature. Austin: U. Texas Press, 1956.

33. Muller, H. J.: Human values in relation to evolution. *A.I.B.S. Bull.*, 7: 91, In press, 1957.

34. Newcombe, H. B.: *Nature*, 178: 1413, 1956.

35. Bates, M., and Humphrey, P. S. (eds.): The Darwin Reader. New York: Scribner, 1957.

36. Dodson, E. O.: Genetics, the Modern Science of Heredity. Philadelphia: Saunders, 1956.

37. Kempthorne, O.: An Introduction to Genetic Statistics. New York: Wiley, 1957.

38. Moore, J. A.: Principles of Zoology. New York: Oxford U. Press, 1957.

39. Swanson, C. P.: Cytology and Cytogenetics. Englewood Cliffs: Prentice-Hall, 1957.

40. Winchester, A. M.: Heredity and Your Life. New York: Vantage Press, 1957.

41. Alström, C. H., and Olson, O.: Heredo-Retinopathia Congenitalis. Lund: Berlingska Boktryckriet, 1957.

42. Crowe, F. W., *et al.*: A Clinical, Pathological and Genetic Study of Multiple Neurofibromatosis. Springfield: Thomas, 1957.

43. Hallgren, B.: Enuresis, A Clinical and Genetic Study (*Acta Psychiat. et Neurol.*, Supp. 114). Copenhagen: Munksgaard, 1957.

44. McKusick, V. A.: Heritable Disorders of Connective Tissue. St. Louis: Mosby, 1956.

45. Stjärren, T., and Larsson, T.: Oligoschrenia in Combination with Congenital Ichthyosis and Spastic Disorders. Copenhagen: Munksgaard, 1957.

46. Anderson, J. E. (ed): Psychological As-

pects of Aging (Proc. Conf. on Planning Research, Bethesda, 1955). Washington: Am. Psychol. Assn., 1956.

47. Moore, J. E., *et al.* (eds.): The Neurologic and Psychiatric Aspects of the Disorders of Ageing (Proc. Assn. Res. Nerv. Ment. Dis., 1955). Baltimore: Williams & Wilkins, 1956.

48. Wolstenholme, G. E. W., and O'Connor, C. M. (eds.): Methodology of the Study of Ageing. Boston: Little, Brown & Co., 1957.

49. Kallmann, F. J.: *Eugen. Quart.*, 4: 162, 1957.

50. St. Whitelock, O., *et al.* (eds.): Subcellular Particles in the Neoplastic Process. *Ann. N.Y. Acad. Sci.*, 68: 1957.

51. Genetic Concept for the Origin of Cancer. *Ann. N. Y. Acad. Sci.*, In press, 1957.

52. Buckwalter, J. A., *et al.*: *J.A.M.A.*, 162: 1210 and 1215, 1956.

53. Hsia, D. Y.: *Am. J. Hum. Genet.*, 9: 98, 1957.

54. Pfändler, U.: *J. Génét. hum.*, 5: 248, 1956.

55. Howells, W. W., and Slowey, A. P.: *Am. J. Hum. Genet.*, 8: 154, 1956.

56. Kishimoto, K.: A Method of Calculation of Mutation Rate and its Application. In 1956 Report of Res. Inst. Environmental Med., Nagoya U., 1957.

57. Vogel, F.: *Z. menschl. Vererb.-u. Konstitutionslehre*, 33: 470, 1956.

58. Kemp, T. (ed.): Proc. First International Congress of Human Genetics, Parts 1-5. Basel: S. Karger, 1957.

59. Paterson E. A., and Sober, H. A.: *J. Am. Chem. Soc.*, 78: 751, 1956.

60. Sober, H. A., *et al.*: *Ibid.*, 78: 756, 1956.

61. Lenz, W.: *Ann. Paediat.*, 188: 65, 1957.

62. Lenz, W.: *A. Ge. Me. Ge.*, 6: 231, 1957.

63. Bohle, A., and Heinz, H. A.: *Klin. Wchnschr.*, 34: 981, 1956.

64. Plunkett, E. R., and Barr, M. L.: *J. Clin. Endocrin. Met.*, 16: 829, 1956.

65. Plunkett, E. R., and Barr, M. L.: *Lancet*, 271: 853, 1956.

66. Barr, M. L.: *Prog. Gyn.*, 3: 131, 1957.

67. Pare, C. M. B.: *J. Psychosom. Res.*, 1: 247, 1956.

68. Witschi, E., *et al.*: *J. Clin. Endocrinol.*, 17: 737, 1957.

69. Beattie, L. M.: *Can. Serv. Med. J.*, 13: 469, 1957.

70. Reitalu, J.: *A. Ge. Me. Ge.*, 6: 393, 1957.

71. Taillard, W., and Prader, A. J.: *Génét. hum.*, 6: 13, 1957.

72. Stern, C.: *Am. J. Hum. Gen.*, 9: 147, 1957.

73. Penrose, L. S.: *Listener*, 57: 748, 1957.

74. Lüers, H., *et al.*: *Ärztliche Forschung*, 10: 355, 1956.

75. Vogel, F.: *Acta Genet.*, 7: 334, 1957.

76. Vogel, F., and Wendt, G. G.: *Z. menschl. Vererb.-u. Konstitutionslehre*, 33: 425, 1956.

77. Faij, L.: *Acta Genet.*, 7: 437, 1957.

78. Baroff, G. S.: *Am. J. Ment. Def.*, 61: 753, 1957.

79. Eysenck, H. J.: *Acta Psychol.*, 12: 95, 1956.

80. Huizinga, J.: *Acta Genet.*, 7: 47, 1957.
81. Lamy, M.: *Ann. Hum. Gen.*, 21: 57, 1957.
82. Waardenburg, P. J.: *Acta Genet.*, 7: 10, 1957.
83. Walker, N. F.: *Acta Genet.*, 7: 33, 1957.
84. Johnson, M. J. E., and Peters, C. H.: *J.A.M.A.*, 163: 20, 1957.
85. Nicholson, D. N., and Keay, A. J.: *Arch. Dis. Child.*, 32: 325, 1957.
86. Branger, F.: *J. Génét. hum.*, 5: 1956.
87. Kozinn, P. J., *et al.*: *J. Pediat.*, 51: 58, 1957.
88. Chandler, J. H., and Bebin, J.: *Neurology*, 6: 187, 1956.
89. Jordan, W. M.: *Brit. Med. J.*, 8: 132, 1956.
90. Bearn, A. G.: *Am. J. Med.*, 22: 747, 1957.
91. Guttmacher, A. F.: *Proc. R. Virchow Med. Soc.*, 16: In press, 1957.
92. Kishimoto, K.: *Proc. Fifth Internat. Conf. on Planned Parenthood*, 1957.
93. Böök, J. A.: *Ann. Hum. Gen.*, 21: 191, 1957.
94. Slatis, H. M., and Reis, R. H.: *Acta Genet.*, 7: 53, 1957.

NEUROPATHOLOGY, ENDOCRINOLOGY AND BIOCHEMISTRY

BRAIN MECHANISMS AND CONSCIOUSNESS

A BOOK REVIEW

O. R. LANGWORTHY¹

The author has attempted in these yearly reviews to present new and theoretical neurological concepts which may eventually have important impact upon psychiatric thought. Research workers in the fields of neuro-anatomy, neurophysiology, neurosurgery, psychology and psychiatry were invited to review present day thinking regarding the functional significance of the brain stem reticular formation. The results of the symposium were published as a book(1). This research group was troubled constantly by semantic problems.

First consider "brain mechanisms." Discovery of the remarkable functional properties of the extensive core of gray matter lying adjacent to the principal afferent and efferent pathways in the brain stem and diencephalon has stimulated new conceptions of the integration of the brain as a whole. At the very start relations were found between the activity of this reticular system and states of consciousness, sleep and wakefulness. Penfield felt the necessity for a central structure in the brain stem which would serve as an anatomical basis for the coherent unity of mental processes. His hypothetical centrencephalic system of neurones in the brain stem has equal functional relationships with the two hemispheres and closely inter-related connections with widespread areas of each hemisphere. Magoun postulated an ascending reticular system which is capable of activating the cortex as a whole. Morison

and Dempsey have described a system of neurones in the thalamus called the intralaminar or recruiting system. Jasper found that bilateral wave and spike activity characteristic of the electroencephalogram of petit mal epilepsy could be reproduced by stimulation within the intralaminar portions of the thalamus; at the same time petit mal seizures could be produced in animals showing that this system must be closely related to the mechanisms of consciousness. The classical afferent projections to particular areas of the cortex may be called specific and the more diffuse, bilateral projection system nonspecific.

"Consciousness" provided even more difficulty of definition. According to Magoun consciousness obviously accompanies the transition from sleep to wakefulness. Hebb designated consciousness as the responsiveness of the normal waking animal. Integration is the major feature of consciousness (Fessard). Hebb stated that you find integration in a flatworm but you cannot assume that it is conscious. Consciousness is also a problem of temporal order. Hebb stated that memory and consciousness cannot be separated topographically. Penfield said that man is fully conscious when he is aware of his present experience and sets it in perspective with his past experience. Kubie stated that consciousness is an abstraction and cannot as such be the object of scientific investigation. Lashley defined consciousness as the process of awareness.

¹ Johns Hopkins University, Baltimore, Md.

Sleep is another term which is difficult to define with precision. Sleep is not simply a passive overall reduction of activity but a complex and coordinated state (Hess). Pavlov defined sleep as an irradiation of inhibition. Walter suggested that sleep was an attitude rather than just an inevitable or a necessary state. He defined sleep as a raising of the standard of significance required of stimuli. Lashley stated that there is no criterion of human sleep except in activity, lack of movement or the like. Hess found that a depressive effect may be elicited by stimulation of a clear cut area in the diencephalon. The animal shows decreased activity and the brain potentials show patterns of normal sleep. Bremer produced a condition of *cerveau isolé* by midbrain transection. These animals remain asleep and the brain wave potential is of a sleep pattern. Olfactory or visual excitations as well as cortical stimulation can transitorily arouse these animals. The caudal part of the reticular formation which is disconnected from the midbrain possesses by reason of the richness and variety of its different connections, the greatest functional importance in wakefulness.

Although there is no scientific justification, the present author will consider reticular, intralaminar, centrencephalic and nonspecific as synonymous. Lorente de Nó described specific afferent fibers to the cortex as ending principally in layer four. The non-specific fibers coming from undetermined regions of the thalamus, transcortical fibers or transcallosal fibers end in all layers of the cerebral cortex. The axones of specific fibers end around the bodies of nerve cells whereas the nonspecific axones connect with the terminations of dendrites (Chang). The paracellular endings may act in modifying the excitability of the cortex, regulating the transmission in specific synaptic circuits.

Magoun discovered that direct excitation of the reticular formation of the brain stem induces changes in the electroencephalogram seemingly identical to those observed in awakening from sleep. The regions from which this arousal could be induced included the subthalamus, the dorsal hypothalamus and the ventromedial thalamus. After lesions were made in the cephalic portion of this system in monkeys, the animals remained in

a comatose state with the absence of all behavior associated with wakefulness. A reversible reduction of activity in this region may account for the transient loss of wakefulness in anesthesia. Conversely a subconvulsive dose of strychnine led to pronounced augmentation of evoked reticular discharge with little change in cortical activity. Magoun suggested that the fibers involved in this reaction may travel in the thalamic fasciculus. Nauta considered that the medial forebrain bundle might be an important tract in relaying this response. Green found that the response is found at considerably lower threshold in the hippocampus than in the neocortex. Magoun stressed that rate of the stimulation was important. Shocks at ten per second increase the amplitude of the rhythm, a recruiting response, while shocks at 25 to 30 per second give desynchronization of the pattern and arouse the animals.

Olszewski approached the problem from a neuroanatomical angle. The reticular formation is a poorly defined structure. The anatomical and physiological conceptions of the reticular formation do not correspond. It is not a morphological unit but is composed of many nuclei of different structures. The author delineated forty-eight nuclei in the reticular formation. The term reticular formation could advantageously be dropped and when speaking of any particular region of the brain stem reference should be made to the nuclei which comprise it. Olszewski predicted that future investigation will disclose functional differences between all nuclei of the lower brain stem.

Nauta and Whitelock discussed the non-specific thalamic projection system. There are small areas from which the whole non-specific system can be activated. The nuclei from which these modifications of cortical activity can be evolved are situated in or near the midplane of the thalamus, in the internal medullary lamina as well as in the paralaminar part of the *n. dorsomedialis*, the *n. ventralis anterior* and the reticular complex of thalamus. The nonspecific thalamic groups tend to function as a unitary system within which patterns of topical localization are likely to exist. Projection takes place mainly through chains of short neurones. Marsan stated that lesions of *n. ventralis anterior*

and n. reticularis are capable of abolishing the cortical recruiting responses in a more or less discrete fashion.

Moruzzi reported the results of microelectrode analysis of the reticular mechanisms and of their influence upon the cerebral cortex. This study was limited to the medial bulboreticular formation. Cerebellar polarization elicits a powerful inhibition of spontaneously active reticular units. The same bulboreticular unit may be influenced by sensory, cerebellar and motocortical volleys. The spontaneous discharge is increased by a sensory volley. There is a problem of disassociating ascending from descending shock discharges.

Jasper studied the specific and nonspecific systems in relation to microelectric records of brain waves. Stimulation of the nonspecific system may produce a successive increase in amplitude of cortical response in terms of unit discharge of cortical areas, the recruiting response. Unit firing from stimulation of the specific system produces discharges at shorter latency and prolonged after discharge may occur. The nonspecific system has a close relationship to spontaneous resting rhythms such as the alpha rhythm. The increase of amplitude of cortical responses on stimulating the nonspecific system is particularly marked in the frontal and parietal regions. Jasper found that the nonspecific thalamocortical system may respond in parts, selectively. It is closely interconnected, however, by multisynaptic pathways. The thalamic reticular system seems to receive collateral afferent connections from all the principal ascending sensory pathways. A system of neurones having bilateral connections would have to be sought caudal to the thalamus in the reticular system. Nauta believed that cells in the specific nuclei of the thalamus also give rise to nonspecific fibers in the cortex. Jasper stated that the interpretation of the function of the reticular system depends to a great extent upon what the functional significance of the electrical activity of the cortex may be, since the latter has been used extensively to test reticular system function.

Penfield postulated that the indispensable substratum of consciousness lies outside the cerebral cortex and probably in the dien-

cephalon. Stimulation of the superior and lateral surfaces of the temporal lobes in patients often elicits remote or recent memories. The two temporal lobes have similar functions and contain records which are identical. It would go beyond the evidence to conclude that all memory records are necessarily stored in ganglionic patterns in the temporal cortex. Transcortical association tracts between functional areas of the cortex are of minor importance. It was suggested that sensory information is integrated within the centrencephalic system. A selected portion of this information is then somehow projected outward to the temporal cortex by the portion of the system which is in functional connection with the temporal cortex of both sides. As it is thus projected, a comparison is made with past experience, thanks to the records of the past that are held there, and judgement with regard to familiarity and significance is made. We should not think in terms of one level of the nervous system divorced from other levels. A large part of voluntary muscular action is produced by a stream of impulses that flows from the centrencephalic gray matter outward to the precentral gyrus of each cortex and downward in the corticospinal pathway to the muscles. Selection or the focusing of attention depends upon action within the centrencephalic system or action between that system and other areas of the brain such as the sensory way stations of the cortex.

Gestaut presented electroencephalographic observations regarding the diffusely projecting nonspecific system acting as a whole or in parts. Section of or absence of the corpus callosum in man does not interfere with bilateral integration and synchronization of cerebral rhythms. Likewise lesions of the medulla or pons do not appreciably modify cerebral electrogenesis, whereas lesions of the mesencephalon and diencephalon produce slow bilateral synchronisms in fusiform bursts. He postulated that most localized electroencephalographic abnormalities are of deep seated origin and are projected to the cortex from corresponding subcortical structures.

The problem of consciousness may be approached by a study of disassociated states, for example, hypnotism or mescaline poison-

ing. Hebb discussed the disassociated states produced in subjects deprived of incoming sensory patterns by the manipulation of external environment. Morison postulated that the reticular sensory system is the most primitive sensory system and that it makes central connections in the midbrain and diencephalon with other reticular areas which can store traces, engrams, as a result of past experience. Coincidence or congruence between an incoming pattern of impulses and a filing card of past experience results in a sense of awareness or consciousness. The more rapidly conducting, classical sensory system, may be thought of as a more recent arrangement for projection of precisely refined sensory pictures on the cortex or thalamus. Mescaline poisoning might decouple the incoming sensory patterns from the filing arrangements in the centrencephalic system, thus allowing the latter to "free wheel." Dreaming in light sleep might be thought of as a similar sort of decoupling perhaps because the specific sensory system is more asleep than the centrencephalic area.

Fessard provided a critical and comprehensive review of the basic issues of the conference which is too fundamental to consider in detail here. He spoke of consciousness as an aspect of life in action or experienced integration. There may be a rudiment of consciousness in living beings that are devoid of functional cortex or experimentally deprived of it. Full consciousness would appear as a mere enrichment of crude consciousness, as a result of projection of cortical patterns of activity down to a specific center. Fessard spoke of the dynamic intrinsic properties of reticular arrangements of neurones with short axones. Reticular systems behave as a multiple transmitting system. They can receive messages without immediately giving

out orders, working as integrators. They exhibit spontaneous activities generally in a rhythmic form and exert actions as pace-makers. In reticular systems there are no private lines; axone collaterals form overlapping fields where each impulse loses its individuality. Transient organizations of the conscious present have a thickness in time which cannot be neglected. Time and experienced integration are related in an orderly sequence of integration according to rules that escape our understanding.

In the summary statements, Lashley was not convinced by the evidence that the non-specific projection system is more closely related to conscious processes than any part of the brain. Bremer felt that consciousness was not located in any special cerebral area. The relationship between the nonspecific thalamic system and the brain stem reticular formation is not known. Similarly, there is no information concerning the functional interrelation between impulses emitted by the specific sensory thalamic nuclei and the diffuse system. Adrian did not know how far we could go in regard to the reticular system. Is it a mechanism to wake up and put us to sleep or does it have to do with the direction of attention and the actual work of the conscious brain? Bremer gave an opinion that consciousness is an integrative process of the whole brain. This view was attacked by Jasper as a sterile concept, leaving no experimental approach to this problem. Rioch stated that consciousness is a phenomenon of interpersonal reaction.

BIBLIOGRAPHY

1. Brain Mechanisms and Consciousness. A Symposium. Oxford, Eng.: Blackwell Scientific publications Ltd.; Toronto: Ryerson Press; Springfield, Ill.: Charles C Thomas.

ELECTROENCEPHALOGRAPHY

W. T. LIBERSON, M. D.¹

Recent progress in electroencephalography can best be outlined by briefly summarizing the EEG and related sessions of the First International Congress of Neurological Sciences which was held last July in Brussels.

¹ VA Hospital, Northampton, Mass.

The writer will therefore limit this review to the proceedings of this Convention although some reference will also be made to basic studies published elsewhere. For current literature the reader is referred to the *Journal of EEG and Neurophysiology* and

to a recent review(7). Three important monographs were published(11, 12, and 36).

Basic Studies.—A fascinating "natural history of the nerve impulse" was outlined(5). Graded response to stimulation is held as most primitive and most generally present in the nervous system. "All-or-none" structures emerged as a necessary development in order to secure transmission of stimulation over great distances. Thus for instance graded response of a receptor determines a corresponding graded response of dendrites of the associated central neurons through repetitive "all-or-none" axonal activity summated at the synaptic level. As in the chains of short neurons of the central nervous system, the graded responses and their field effects might be prevalent, the current interest in dendritic potentials remains unabated. Dendrites may share with many other synaptic structures an inability to respond to electrical stimuli(15) being activated by chemical transmitters, different for excitatory and inhibitory synapses. Curare in high dosage may suppress dendritic potentials, although differential sensitivity of inhibitory and excitatory neurons, of different CNS structures, and, possibly, of different species(25) makes it difficult to analyze the available data. A recent discovery of the effects of gamma-aminobutyric acid (35) which suppresses negative components of the dendritic potential while unmasking an underlying positive component, is consistent with a selective enhancement by this substance of inhibitory processes. Its presence in the normal brain tissue(1) and the occurrence of convulsions elicited by its chemical antagonists (hydrazides) suggests the clinical importance of these studies(22). The relation of inhibition to hyperpolarization was experimentally demonstrated(11, see also 33), while problems related to inhibitory functions of dendrites were critically reappraised by Russian physiologists (3).

Consciousness.—Reticular mechanisms (with their axo-dendritic synapses) of consciousness continue to be one of the main topics of electrographic research. A certain number of findings are difficult to explain: in certain comas the EEG may be either normal or "flat" with a conspicuous absence of

delta waves usually associated with an impairment of awareness ascribed to the deficiency of the alerting reticular mechanisms. It was suggested that this may be the case when only the caudal reticular formation is involved. Conversely, cholinergic drugs may apparently activate the cortical brain wave pattern without the presence of the corresponding correlates of alert behavior. There may be a difference in time between the effects of experimental conditions upon respectively EEG pattern and behavior. The explanation of these discrepancies has been sought either in the absence in some instances of a total involvement of the reticular formation (bulbar comas) or in the alleged selective effects upon the cortex (case of cholinergic drugs). Only when a total coordinated cortico-subcortical disturbance is present does EEG reflect behavior (for literature and further discussion, see (8)). An EEG study of patients in whom alteration of consciousness was found following vertebral angiography revealed delta activity (unilateral or bilateral) only when the contrast medium was located in the posterior cerebral arteries (probably only their central branches). When the contrast medium failed to fill the vessels beyond the basilar artery and its collaterals, the consciousness was impaired without any EEG changes. However, even in these cases no alerting reactions could be observed following sensory stimuli (28). As to the thalamic portion of the "non-specific" activating system, recent neurosurgical studies in man show that low frequency stimulation elicits drowsiness whereas high-frequency stimuli cause arousal; however, in the latter case blocking of alpha or slow waves is not observed usually(18). The absence of reactivity of the EEG patterns during comas (whether or not the delta rhythm is present) is considered of a poor prognostic significance (13). It might be of interest to speculate, in the light of these findings, as to the significance of a reduced reactivity of EEG tracings in schizophrenics recently reasserted by various techniques of "functional electroencephalography"(6).

Conditioning — Electroencephalography, without solving the problems of mechanisms of conditioning, added a new dimension to

such studies. Whether electrical potentials are investigated during classical conditioning (for instance, conditioned motor behavior), or during occipital alpha blocking, or, "frequency-specific" (the same as that of the unconditional flicker stimulus) responses after association of sound (conditional stimulus) with light (unconditional stimulus), most of the observers agree that the following sequence of events takes place (9, 12, 29, 32, and 39): 1. Either presence of a diffuse alerting response to the previously neutral stimulus or generalization of "evoked potentials" induced by the stimulus in previously unresponsive structures; and 2. selective switching of the effects of the conditional stimulus to the area corresponding to the unconditioned reactions (motor area in the classical technique; occipital cortex in the son-flicker associations). Thus Pavlovian concepts of the sequence generalization-concentration of "excitation" is now illustrated by a different although related set of facts; excitation appearing to "concentrate" in the area of the unconditioned stimulus. Depth electroencephalography reveals, in addition, that conditioned alerting responses are observed earlier and more consistently in the mesencephalic reticular formation than in the cortex. This suggests to some authors (12) that the temporary connections are established at that level, whereas for some others hypothalamus appears to be the site of the new associations (27). Recording of evoked potentials during the process of conditioning may reveal the recruitment of new subcortical structures in the integrated response. Thus for instance, hippocampus (which reacts poorly to flicker under normal conditions) shows a steady response to this stimulus in the process of conditioning (39). Again the Pavlovian concepts of external versus internal inhibition have been reviewed in the light of the EEG findings. Thus, external inhibition is usually associated with a flattening of the record, whereas the internal inhibition (particularly extinction) may be expressed by slow waves. Microelectrographic analysis (37) made during a simultaneous ordinary EEG recording shows an extreme complexity of single unit activities during different phases of conditioning. Thus, for

instance, during a flattening of the record some cells may show an increase of activity while some others may exhibit evidence of inhibition or fail to respond. In many cases only the pattern of response changes. Of course, Pavlovian concepts of inhibition are difficult to correlate with the activities of an aggregate of cells, as a suppression of a specific conditioned reflex may be associated with an activation of a reaction of the opposite functional significance ("induction"). Clinical application of conditioning (20, 24), without solving the main etiological problems, may however contribute to the enrichment of clinical semeiology. For instance, electrographic distinctions may be made in catatonic stupor between the deficiencies of either afferent or efferent reactivity. Psychasthenic and other neurotic conditions were analyzed by this method. The classical Pavlovian process of "differentiation" by which unrelated stimuli are progressively losing their effectiveness are now considered in the light of electrographic investigations of "habituation" (disappearance, even in the lower level sensory nuclei, of evoked potentials following repetition of stimuli). From this viewpoint recent contributions revealing an active control by reticular formation of the reactivity of receptors are of extreme interest (16).

Petit Mal.—Centrencephalic origin of petit mal epilepsy appears increasingly controversial. There is a growing evidence favoring the presence of a continuum between a pure lapse of consciousness, associated with a synchronous 3 c/sec. spike-and-wave discharge, and the temporal automatisms associated with other electrographic patterns. Between these two extremes there is a great number of cases characterized by a loss of consciousness associated with automatisms and 3 c/sec. spike-and-wave discharges (2, 23, and 38). In some cases of petit mal, organic etiology as well as personality disorders were described (17, 30, 31, and 34). In patients with petit mal a self-sustained 3 c/sec. spike-and-wave discharge could be elicited by intracerebral electrical brief stimuli applied to a great variety of structures without any indication of a lower threshold in the thalamus (4, 19). A generalized and quasi-symmetrical spread of 3-5 c/sec. dis-

charge may not be due to the presence of a single pacemaker: bilateral synchronization can be achieved by a mutual influence of several discharging cell groups(10). The possibility of a selective decrease of accommodation to an epileptogenic process of low intensity may be a factor explaining the presence of prolonged DC shifts with superimposed spike-and-wave discharges observed in petit mal. In other forms of epilepsy such patterns are of brief duration(26). Alteration of consciousness is most pronounced at the instant when the spike of the spike-and-wave complex is recorded(13).

Other sessions of the Convention were devoted to the problems of ontogenetic development(21) and spread of abnormal discharges(14).

BIBLIOGRAPHY

1. Bazemore, A., *et al.*: *Nature*, 178: 1052, 1956.
2. Beassart, M.: Pp. 62-63 in *Proc. of the Fourth International Congress of EEG and Clinical Neurophysiology*, Brussels. *Excerpta Medica*, 1957.
3. Beritov, I. S., ed.: *Gargskie besedy: Nature of central inhibition*. Tiflis, Academy of Sciences, 1956, Pp. 452.
4. Bickford, R. G.: Pp. 289-295 in *Proc. of the Fourth International Congress of EEG and Clinical Neurophysiology*, Brussels. *Acta Medica Belgica*, 1957.
5. Bishop, G. H.: *Physiol. Reviews*, 36: 376, 1956.
6. Blum, R. H.: *Science*, 126, 749, 1957.
7. Brazier, Mary A. B.: Pp. 262-276 in *Progress in Neurology and Psychiatry*. E. A. Spiegel, Ed. New York: Grune and Stratton, 1957.
8. Bremer, F.: Pp. 49-66 in *Proc. of the First International Congress of Neurological Sciences (2)*, Brussels. *Acta Medica Belgica*, 1957.
9. Buser, P., and Roger, A.: Pp. 417-444 in *Proc. of the Fourth International Congress of EEG and Clinical Neurophysiology*, Brussels. *Acta Medica Belgica*, 1957.
10. Droogleever-Fortuyn, J.: *Ibid*, pp. 259-271.
11. Eccles, J. C.: *The Physiology of Nerve Cells*. Baltimore: The Johns Hopkins Press, 1957, pp. 270.
12. Fischgold, H., and Gastaut, H., ed.: *Conditionnement et Reactivite en Electroencephalographie*. Paris: Masson and Cie, 1957, pp. 475.
13. Fischgold, H.: Pp. 181-213 in *Proc. of the First International Congress of Neurological Sciences (2)*, Brussels. *Acta Medica Belgica*, 1957.
14. Green, J. D., and Naquet, R.: Pp. 225-249 in *Proc. of the Fourth International Congress of EEG and Clinical Neurophysiology*, Brussels. *Acta Medica Belgica*, 1957.
15. Grundfest, H.: *Physiol. Reviews*, 37: 1957 (in press).
16. Hernandez-Peon, R.: Pp. 450-455 in *Proc. of the Fourth International Congress of EEG and Clinical Neurophysiology*, Brussels. *Acta Medica Belgica*, 1957.
17. Hergreen, H.: Pp. 65-66 in *Proc. of the Fourth International Congress of EEG and Clinical Neurophysiology*, Brussels. *Excerpta Medica*, 1957.
18. Jung, R.: Pp. 148-179 in *Proc. of the First International Congress of Neurological Sciences*, Brussels. *Acta Medica Belgica*, 1957.
19. Jung, R.: Pp. 296-302 in *Proceedings of the Fourth International Congress of EEG and Clinical Neurophysiology*, Brussels. *Acta Medica Belgica*, 1957.
20. Jus, A., and Jus, C.: *Ibid*, pp. 345-370.
21. Kellaway, P.: *Ibid*, pp. 141-154.
22. Killam, K. F.: *J. Pharmac. and Exp. Therap.*, 119: 263, 1957.
23. Kreindler, A.: Pp. 273-288 in *Proc. of the Fourth International Congress of EEG and Clinical Neurophysiology*, Brussels. *Acta Medica Belgica*, 1957.
24. Kreindler, A.: *Ibid*, pp. 371-374.
25. Liberson, W. T., *et al.*: *J. EEG and Clin. Neurophysiol.*, 9: 1957 (in press).
26. Liberson, W. T.: Pp. 68-69 in *Proc. of the Fourth International Congress of EEG and Clinical Neurophysiology*, Brussels. *Excerpta Medica*, 1957.
27. Lissak, K., and Grastyán, E.: Pp. 445-449 in *Proc. of the Fourth International Congress of EEG and Clinical Neurophysiology*, Brussels. *Acta Medica Belgica*, 1957.
28. Lundervold, A.: Pp. 214-218 in *Proc. of the First International Congress of Neurological Sciences (2)*, Brussels. *Acta Medica Belgica*, 1957.
29. Majkowski, J.: Pp. 100-101 in *Proc. of the Fourth International Congress of EEG and Clinical Neurophysiology*, Brussels. *Excerpta Medica*, 1957.
30. Meyer-Mickeleit, R. W., and Schneider, E. R.: *Ibid*, pp. 71-72.
31. Mises and Lérique-Koechlin: *Ibid*, pp. 72-73.
32. Morell, F.: Pp. 377-391 in *Proc. of the Fourth International Congress of EEG and Clinical Neurophysiology*, Brussels. *Acta Medica Belgica*, 1957.
33. Perry, W. L. M.: *Ann. Rev. Physiol.*, 18: 279-308, 1956.
34. Pond, A.: P. 75 in *Proc. of the Fourth International Congress of EEG and Clinical Neurophysiology*, Brussels. *Excerpta Medica*, 1957.
35. Purpura, D. P., *et al.*: *Science*, 125: 1200, 1957.
36. Radermecker, J.: *Systématique et électro-encéphalographie des encéphalites et encéphalopathies*. EEG and Clinical Neurophysiology, Suppl. 5, 1956. P. 243.
37. Ricci, G., *et al.*: Pp. 401-415 in *Proc. of the Fourth International Congress of EEG and Clinical Neurophysiology*, Brussels. *Acta Medica Belgica*, 1957.
38. Sabirana, A., and Oller-Daurella, L.: *Ibid*, pp. 393-310.
39. Yoshii, N., *et al.*: *Ibid*, pp. 314-333.

CLINICAL PSYCHOLOGY

FREDERICK WYATT, PH.D.¹

Statements to the effect that this or that country leads all the others in a certain subject are usually specious in addition to being tedious. If by way of introducing a brief survey a statement is made to the effect that the United States at present is the leading country in the behavioral sciences (to which on its theoretical premises psychiatry may be counted), this statement should at least be qualified at once. Quite factually there is a greater scope to both psychology and psychiatry in the United States than elsewhere. More people are at present active in these fields than in other countries, and many varied jobs are available to them. There is a proportionate output of publications in psychology and psychiatry and a proportionate rate of growth in either, forecasting an even greater expansion. Both public sentiment and social structure of the United States seem to have much to do with provoking the extraordinary increase in the theoretical study of behavior and conduct, and its ever widening application of educational, preventative, and readjustive efforts. The significance of these efforts in the consciousness of the public again can be safely assumed to be greater here than anywhere else. As one might expect, this development has been under way for much longer than the last dozen years. Yet it entered decidedly into a new phase with the end of the second war. We might take this date for the mark of the new era in which, for the first time in civilization concern for the psychological adjustment of the individual has become a dimension of public life(21).

The fact that the United States after the war has been rapidly becoming the place to which one goes in order to pursue advanced studies in psychology or psychiatry (as Paris, or the German universities, or Vienna had been before) added its share to a trend of hemispheric isolation in science, ignoring other people's contributions, especially when they are written in a foreign tongue. While we produce more psychology and psychiatry than others, only the future can assess our true productivity. Funds, which fortunately

in this country are available to the behavioral sciences, make certain large scale investigations possible and can aid and facilitate most other researches. We have as yet no way of telling whether this new affluence will also elicit new ideas and coax genius into appearance. Maintaining contact with similar endeavors in other countries, therefore, is not only scientific good manners, but elementary good sense.

A broad introduction to the major trends of European psychology is provided by David and von Bracken(5). This book is based on a symposium on European characterology at the International Congress of Psychology in Montreal, 1953, and was published under the auspices of the International Union of Scientific Psychology. It represents not only a great many different viewpoints in Continental, British, and American psychology but several attempts to define these differences by comparison; thus it succeeds in demonstrating the major trends in contemporary psychology on their ideological premises more clearly than this had been done before. Topics discussed in this manner are: Personality theory in Germany (von Bracken), Britain (Franks), Italy (Roser), and France (Zazzo), as well as Swiss psychology (Ellenberger). Various aspects of psychology based on Existentialism are treated in papers by Buytendijk and van Lennep; Schichtenpsychologie (psychology of the levels of the mind) in papers by Lersch and Gilbert, a Thomistically oriented dynamic psychology in a paper by Nuttin. There are essays on the logic and validity of psychoanalysis by Frenkel-Brunswik and a critique of Phenomenology and Psychoanalysis on Developmental Psychology (Anderson), Neural-humoral Factors in Personality (Luthe), Character Change (Thomae) and Experimental Depth Psychology (Wolff). The volume is completed by comparative critical studies of the psychologies presented before, by Wyatt, and McClelland respectively. An annotated bibliography by David will be useful to anybody wishing to follow up these "perspectives" in greater detail. For other, briefer surveys of European psychology and psychiatry see (6, 10, 12).

¹ 1027 East Huron St., Ann Arbor, Mich.

The centenary of Freud's birth was celebrated in Germany in a lecture series jointly sponsored by the universities of Frankfurt and Heidelberg. The result has been published as volume 6 of the *Frankfurter Beiträge zur Soziologie, Freud und die Gegenwart* (1). Apart from the quality of the individual articles this volume has again the distinction of putting together contributions which show trends characteristic for the difference between European and American orientation. The book contains papers by E. H. Homburger, René A. Spitz, Michael Balint, E. E. Krapf, Edwin Stengel, Ludwig Binswanger, Gustav Bally, Frederick Wyatt, Franz Alexander, Hans Zulliger, and Herbert Marcuse. *Progress in Psychotherapy* (7), in addition to other useful information and several critical papers, has also a survey on "Present Psychotherapeutic Development in European and South American Countries."

As an attempt at a synthesis between psychoanalysis and Piaget's psychological theories Odier's book (13) will also be of systematic interest in addition to focusing on the specific clinical problem of non-differentiating ("magical") forms of mentation under stress. For an encyclopaedic survey of studies on children's thinking, see Russell's book (17).

Another cooperative European endeavor brings together ideas about the development of the child (14). In this volume some of the foremost child psychologists of Western Europe present views about stages of growth. While no definite schema of growth emerged, many highly interesting ideas were articulated in a series of well-planned sessions. Just because these ideas differ from the views on the subject held in this country, the book should be of special interest to American readers. Lois Murphy and her associates present a detailed, and in its observational concreteness rather original, study of the development and the personality of normal children (11). The weight of the study rests on the perceptiveness of the observer and on his methodological freedom in grasping the ever-changing, within itself conflicting and converging, pattern of a child's personality. The emphasis on the healthy or "normal" child makes the wealth and the ingenuity of observation in this book especially interesting.

Whatever the true contribution of Alfred Adler may be—and the authors make a point that it is greater in ideas than is commonly accepted—the Ansbachers' book on Adler (2) provides a more extensive, more detailed and more systematic compendium of Adlerian psychology than any previously attempted. In a volume by the late Werner Wolff (20) the results of an extensive inquiry with psychotherapists of different schools are presented. They show not only the enormous variety of terms, approaches, convictions which make up present-day psychotherapy, but imply the need for clarifying its growing semantic confusion and suggest certain trends converging from the plurality of stated (or intimated, or undefined) opinions to not yet clearly articulated new propositions among which the concern with the therapist's personality appears as the most important.

A summary of Russian psychology 1950-56, by Razran, comprehending twenty books (five textbooks, the rest symposia and books devoted to special problems) will be found in *Contemporary Psychology* (15), the new Journal of Reviews of the American Psychological Association, now in its second year.

For the contribution of clinical psychology at large, Brower and Abt offer the second volume of their *Progress in Clinical Psychology* (3). From the point of diagnostic psychology a collection of articles on the MMPI (18), by now the most widely used psychometric test of personality assessment (and dust-bowl empiricism's proudest contribution to clinical psychology) will be found useful. Robert White's *The Abnormal Personality*, one of the most balanced and thoughtful textbooks of abnormal psychology, was published in a considerably modified second edition (19).

A concise and not overly technical account of the psychological implication of industrial management—which also includes the psychological conditions with which management has to deal, and should therefore recognize and understand—is contained in Mason Haire's new book (8). A survey of psychological and sociological factors in occupations is provided by Ann Roe (16). The results of a recent study of the profession of psychology (4) will be of interest inasmuch

as it produces some fascinating data about psychology itself, but in so doing inevitably suggests also ideas about life and career in the professions at large. For a survey of the new profession of clinical psychology, its origin, training, convictions and problems, see Hunt(9).

An extensive study by I. Belknap(2a) focuses on the administration of state mental hospitals and their deficiencies which are seen mainly in a lack of communication between the three levels of people working in such an agency (administrative, professional, attendant), the lack of opportunity for initiating programs which might improve the situation, and the lack of support, instruction and guidance for attendants.

BIBLIOGRAPHY

1. Adorno, T. W., and Dirks, W. (Eds.): *Freud in der Gegenwart. Frankfurter Beiträge zur Soziologie*, Vol. 6. Frankfurt a.M., Europäischer Verlag, 1957.
2. Ansbacher, H. L., and Ansbacher, R. R.: *The Individual Psychology of Alfred Adler*. New York: Basic Books, 1956.
- 2a. Belknap, I.: *Human Problems of a State Mental Hospital*. New York: Blakiston Division, McGraw-Hill, 1956.
3. Brower, D., and Abt, L. E. (Eds.): *Progress in Clinical Psychology*, Vol. 2. New York: Grune and Stratton, 1956.
4. Clark, K. E.: *America's Psychologists: A Survey of a Growing Profession*. Washington, D.C.: American Psychological Association, 1957.
5. David, H. P., and von Bracken, H.: *Perspectives in Personality Theory*. New York: Basic Books, 1957.

6. Ellenberger, H.: *Bull. Menn. Clinic*, 19, 1955, pp. 43-52.
7. Fromm-Reichmann, F., and Moreno, J. L.: *Progress in Psychotherapy*. New York: Grune and Stratton, 1956.
8. Haire, M.: *Psychology in Management*. New York: McGraw-Hill, 1956.
9. Hunt, W. A.: *The Clinical Psychologist*, Springfield, Ill.: C. C Thomas, 1956.
10. McCartney, J. L.: *Arch. Neurol. and Psychiat.*, 75: 1956, pp. 648-58.
11. Murphy, L. B., and Associates: *Personality in Young Children*, Vol. 1: *Methods for the Study of Personality in Young Children*. Vol. 2: *Colin—A Normal Child*. New York: Basic Books, 1956.
12. Nijmegen University, *Psychological Circle: Psychology in Europe*. *Tijdschrift van de Psychologische Kring aan de Nijmeegse Universiteit*, 1956, 4, pp. 53-128.
13. Odier, Ch.: *Anxiety and Magic Thinking*. New York: International Universities Press, 1956.
14. Osterrieth, P., Piaget, J., de Sausure, R., Tanner, J. M., Wallon, H., Zazzo, R., Inhelder, B., and Rey, A.: *Le Probleme des Stades en Psychologie De L'enfant*. Paris: Presse Universitaires de France, 1956.
15. Razran, A.: *Contemp. Psychol.*, 1957, pp. 93-101.
16. Roe, Anne: *The Psychology of Occupations*. New York: Wiley, 1956.
17. Russel, D. H.: *Children's Thinking*. Boston: Ginn, 1956.
18. Welsh, G. S., and Dahlstrom, W. G. (Eds.): *Basic Readings on the MMPI in Psychology and Medicine*. Minneapolis: University of Minnesota Press, 1956.
19. White, R. W.: *The Abnormal Personality* (2nd ed.), New York: Ronald Press, 1956.
20. Werner Wolff: *Contemporary Psychotherapists Examine Themselves*. Springfield, Ill.: C. C Thomas, 1956.
21. Wyatt, F.: *The Amer. Psychologist*, II, 1956, pp. 537-542.

CLINICAL PSYCHIATRY AND PSYCHOTHERAPY

PAUL H. HOCH, M.D.¹ AND NOLAN D. C. LEWIS, M.D.²

As in the past reviews we would like to call attention to some contributions which indicate trends in investigative work in the field of clinical psychiatry. It is obvious that not all contributions of value can be mentioned. We also have to concentrate on con-

tributions in the English-speaking literature or otherwise our task would have to exceed the space available. At first we would like to mention some monographs which are outstanding in last year's literature.

Bois(1) published a stimulating book entitled *Explorations in Awareness* which discusses the processes of observing, thinking, and communicating. Here the author presents practical examples from life situations

¹ New York Psychiatric Inst., 722 West 168th St., New York City.

² New Jersey Neuropsychiatric Inst., Princeton, N. J.

to illustrate how to evaluate what one sees, hears and otherwise experiences. The work is based on some of the fundamental principles of Korzybski's semantics.

A book called *The Urge to Mass Destruction* written by Samuel J. Warner(2) describes the close parallelism between the genesis, dynamics and operations of human destructiveness encountered in patients undergoing psychotherapy. This relationship that obtains in widely scattered areas invites the formulation of principles which may be applied to the threat of mass destruction on the large social scale that threatens the world today. The urge of man to destroy himself along with the others is also emphasized in this text.

A symposium(3) on schizophrenia from the standpoint of psychoanalytic office practice includes the contributions of thirty specialists. It covers the subject from a variety of points of view and the approaches to the problems are varied enough to afford the clinical psychiatrist a comprehensive review of what is being thought and done to understand and treat schizophrenic disorders.

During the year a book entitled *Schizophrenia 1677*(4) appeared bearing in addition to the description of the visions of one Christopher Haizmann who recorded his experiences with the devil in paintings, an excellent historical review of the contributions of psychoanalysis to psychiatry and a critical evaluation of several of Freud's themes and classical publications, including, among others, the Schreber case, mechanism of paranoia, and the libido theory. The analysis of the Haizmann case with the colored illustrations is an instructive bit of clinical psychiatry.

The first Salmon Memorial Lectures were given twenty-five years ago by Adolf Meyer. The lectures were not published at the time but have now appeared posthumously in book form(5). These three lectures explain the foundations of psychobiology and the psychopathology of mental disorders, and the fundamentals of therapy within this framework. It is a valuable book offering a rather complete formulation and overall picture of the Meyerian theories and practice.

The fifth edition of Bernard Hart's widely

known *Psychology of Insanity*(6) came out early in the year. The first edition appeared in 1912 and it soon became famous as an orientation for beginners in psychiatry. The author has revised the introductory chapter on the historical development of the field. Its popularity as a compact text will probably not diminish.

The Roots of Modern Psychiatry written by Altschule(7) points out the history of ideas regarding anxiety, the introduction of ego-psychology into psychiatry and the origins of concepts of unconscious cerebration among numerous other historical accounts of value to psychiatrists. Each essay bears a liberal bibliography useful for medical historians.

In several respects the recently published book *Clues to Suicide*(8) is unique in its particular field. It is a research study by a group of nineteen contributors, it covers theoretical, experimental, and clinical aspects in a comprehensive way, and ends in an appendix consisting of a large number of genuine and simulated suicide notes. The literature on suicide is also apparently well covered.

The third and final volume of Jones' biography *The Life and Work of Sigmund Freud* appeared late in the summer of last year(9). This description of "the last phase" (1919-1939) of Freud's life and work points up the struggles, the suffering, and the successes of the mature years of the creator and master of psychoanalysis. It is also an interesting evaluation of the importance of the psychoanalytic movement for posterity.

In the following we would like to call attention to some articles which we feel contributed to clinical psychiatry, either in methodology or observational material.

The term "postpartum mental illness" as used in this study(10) includes all mental disorders in women in which childbirth was a principal precipitating factor. The study consisted of 100 hospitalized women suffering from postpartum psychic disturbances and a control group of 100 female patients admitted to the same hospital and matched as far as possible for age, type of psychosis, etc., but without childbirth as a factor. Several interesting findings were listed among

which are: 1. postpartum mental disorders do not constitute a disease entity; 2. nearly one half of the illness followed the birth of a second or subsequent child; 3. the postpartum patient was similar in respect to previous mental instability to any other female patient of the same age; 4. postpartum patients with schizophrenia had the same prognosis as did other schizophrenics; 5. of the postpartum patients as a group, about 75% were in fairly satisfactory remissions four years after hospitalization, therefore, the postpartum patient may be considered to have a favorable prognosis; 6. the chance was only one in seven of a subsequent mental disorder following another pregnancy.

Wolman(11) describes 16 latent adult schizophrenics whom he observed in a psychotherapeutic setting. The clinical symptomatology consisted mainly of insomnia, severe anxiety and hypochondriasis. The author found that in early childhood they are under constant threat and worry about their love-demanding mothers. The author feels that latent schizophrenia is not a narcissistic disorder, but results from precocious demands made on the child by the fear of the loss of his love object. The observations of Dr. Wolman are interesting in this group of patients, but we believe that this is not the sole mechanism that produces latent schizophrenia. It has to be considered that relatives of latent schizophrenics often have a similar emotional structure as the patient. This, however, is often not recognized because the intensity of these different schizophrenic structures is varied and the milder forms are overlooked.

The authors(12) present evidence on a case of anorexia nervosa that despite the typical obsessional facade, the underlying condition is actually a psychotic process. They are rather pessimistic of the so-called "insight" therapy. They feel that the most effective therapeutic tool in this malady consists in the attainment of some gratification through human relationship and has to take into account the vast dependency needs of these patients. Most cases of anorexia nervosa which show a severe clinical symptomatology are actually schizophrenic and more and more evidence is being demon-

strated that severe cases of anorexia nervosa are not neuroses, but a deeply ramified psychosomatic expression of a psychotic process.

The authors(13) are presenting a new technique of psychiatric consultations in the internist's offices. After a report by the internist a free associative anamnesis is taken and finally the psychiatrist gives a brief outline of the patient's syndrome, his personality, and the relationship of the patient and physician as they emerged during the consultation. The advantages of this kind of consultation between psychiatrist and internist, especially in regard to the transference situation are described. They feel that the internist gains a better understanding of the patient. The referral of the patient to the psychiatrist for psychotherapy is also made easier if such a necessity should arise. The psychiatrist furthermore could prevent the internist from getting into trouble with cases which he is not prepared to handle or he is able to find out that perhaps the psychiatric problems are unrelated to the medical problems the patient is having. They also make the point that through a joint interview some physicians who are not acquainted with the ways of the psychiatric thinking and working, observe it in action and are then able to appraise the contributions of psychiatry in a proper manner which does not lead to overevaluation and overexpectation.

This important study demonstrates that the social environment has a profound effect on general health(14). It influences the development and progression of all forms of illness regardless of their nature and regardless of the influence of other etiological factors. They found that persons as a group who are experiencing difficulty in adapting to their social environment have a disproportionate amount of all the illness occurring among the adult population. We feel that this study is very important from the point of view of the facts found. The interpretation of the findings will need careful evaluation. They could be interpreted in sociological terms, but they could be interpreted also as constitutional weaknesses which express themselves in the physical organization of the individual on one hand and in social adaptability on the other.

This study (15) reports the social factors in the suicide attempts of 109 patients brought to a general hospital. Patients with chronic alcoholism, conversion reactions, and sociopathic personalities reported a much higher frequency of social difficulty such as marital friction, divorce, job instability, and financial dependency than patients with manic-depressive and chronic brain syndromes. They were not only involved in more social difficulties at the time they made the suicidal attempts, but they reported such difficulties throughout their lives. Before manic-depressive or chronic organic syndrome patients attempted suicide they were disturbed by feelings of depression, self-disgust and worthlessness but seldom by feelings of anger or spite or by feelings of frustration or neglect caused by others, while patients in the aforementioned other diagnostic groups showed the opposite pattern.

The authors (16) describe synchronous recordings made of social interaction and physiological activity. Certain interaction patterns correlated with heart rate and lability of patients and therapists and with skin temperature level and lability of patient. They found that the higher number of "tension" scores during the interview the higher was the heart rate. The higher number of "tension release" scores for the patient, the lower the patients' heart rate. The higher the number of "tension" scores during a given interview, the higher the therapist's heart rate and the lower the heart lability. There was a tendency for the therapist's heart rate and lability to be similar to the patient. When "antagonism" appeared, the patients tended to manifest opposite trends in cardiac functioning. The patients' heart rate would slow down, whereas the therapist's would speed up. The relationship according to the authors indicates a positive physiological identification when the latter is expressed in tension or tension release, but a negative correlation appears when he is expressing negative direct antagonism.

Similar investigations as in the previous article were done by Dr. Malmö and his associates (17) between the interviewer and the one interviewed with means of physiological techniques. The subjects were 19 female psychoneurotics. In the first part the

subject told a story from a TAT card. The examiner, a psychologist, either praised or criticized the story. The patient was then seen by the doctor who proceeded with the clinical interview in which he first questioned the patient about the test asking her other questions and finally reassuring her. The results of these experiments were very interesting because they revealed different physiological reactions to supportive and threatening situations, not only in the patients but also in the examiner. The examiner's reaction indicated that after he had been critical his tension remained high, but the tension fell when the subject had been praised.

The authors (18) tried to investigate the effects of drugs on patients by separating the psychological and sociological influences the drug exerts as separate from the pharmacological effect itself. They tried to evaluate the patients' reaction to the environment with different rating scales. They also established the rate of improvement while they were under observation while not taking the drug. They tried to register the psychological and sociological factors which influenced the patient. When the drugs were then introduced the direct drug effect was distinguished from the "milieu effect." We believe that such studies are important even though it is not easy to evaluate "milieu effect" from drug effect. Nevertheless such studies would contribute to our understanding of the placebo effect. It would also indicate that some time the pharmacological appraisal of the drug alone is not a sufficient indication as to the value of the drug, especially if it is not given to an individual but to a large group of individuals in a hospital setting.

Dr. Frank, *et al.* (19) investigated 91 psychiatric outpatients and they reviewed the literature to determine why patients leave psychotherapy. They found the following facts: attributes of the patient which are positively related to remaining in treatment are class, education, and occupation, fluctuation illness with manifest anxiety, readiness to communicate distress and personal liabilities, influenceability, integrity, and perseverance. With respect to the treatment situation, its relationship to the patient's life sit-

ation, aspects of the treatment itself, and the attempts of the patient himself influence whether or not the patient remains. One of the main factors found in leaving a psychotherapeutic situation is the lack of motivation by the patient. They originally sought help because they were told to seek help, but they had many reservations about the therapy and if the therapeutic situation develops in a manner that they feel justified in leaving it, they will do so.

BIBLIOGRAPHY

1. Bois, J. S. *Explorations in Awareness*, New York: Harper and Brothers, 1957.
2. Warner, S. J.: *The Urge to Mass Destruction*, New York: Grune and Stratton, 1957.
3. Rifkin, A. H.: (Ed.) *Schizophrenia in Psychoanalytic Office Practice*, New York: Grune and Stratton, 1957.
4. Macalpine, I., and Hunter, R. A.: *Schizophrenia 1677: A Psychiatric Study of an Illustrated Autobiographical Record of Demoniical Possession*, London; William Dawson and Sons, Ltd., 1956.
5. Meyer, A.: *Psychobiology: A Science of Man*, Springfield, Ill. Charles C Thomas, 1957.
6. Hart, B.: *The Psychology of Insanity* (Fifth

Edition), Cambridge: Cambridge University Press, 1957.

7. Altschule, M. D.: *Roots of Modern Psychiatry: Essays in the History of Psychiatry*, New York: Grune and Stratton, 1957.

8. Schneidman, E. S., and Farberor, N. L. (Eds.) *Clues to Suicide*, New York: McGraw-Hill Book Company, 1957.

9. Jones, E.: *The Life and Work of Sigmund Freud (1919-1939—The Last Phase)*, New York: Basic Books, Inc., 1957.

10. Foundeur, M., *et al.*: *Arch. Neurol. and Psychiat.*, **77**: 503, 1957.

11. Wolman, B.: *Am. J. Psychotherap.*, **11**: 560, 1957.

12. Meyer, B. C., and Weinroth, L. A.: *Psychosomat. Med.*, **19**: 289, 1957.

13. Grotjahn, M., and Treusch, J. V.: *Psychanal. Rev.* **44**: 176, 1957.

14. Hinkle, L. E., *et al.*: *Am. J. Psychiat.*, **114**: 212, 1957.

15. Robins, Eli, *et al.*: *Am. J. Psychiat.*, **114**: 221, 1957.

16. DiMascio, A., *et al.*: *Psychosomat. Med.*, **19**: 99, 1957.

17. Malmö, R. B., *et al.*: *Psychosomat. Med.*, **19**: 105, 1957.

18. Rashkies, H. A., and Smarrk, E. R.: *Arch. Neurol. and Psychiat.*, **77**: 202, 1957.

19. Frank, J. D., *et al.*: *Arch. Neurol. and Psychiat.*, **77**: 283, 1957.

PHYSIOLOGICAL TREATMENT

JOSEPH WORTIS, M.D.¹

So many new drugs are being developed and promoted by the manufacturers that it is impossible to comment more than briefly on them. The proceedings of several symposia on chlorpromazine and reserpine (1-3) held in Italy, France and in this country, under the sponsorship of the drug houses, have been published in recent months. There is general agreement that chlorpromazine is the most effective of the drugs, though it has considerable toxicity. We have not reached the point where a specific drug can be confidently used for a particular psychiatric disorder or symptom; some empirical trial and error with different drugs and combinations will be necessary in many cases, with certain general indications of their probable range of value to guide us.

HAZARDS OF TRANQUILITY

Under this title the *British Medical Journal* (4) editorially describes some dangers and misgivings that attend the current psychiatric drug boom. The World Health Organization (5) has recently added the tranquilizers to their list of habit-forming drugs. Since indefinite maintenance dosage is necessary in most cases (6), the toxic effect of long-continued use is claiming attention. Though recent reports give an initial incidence of about 1% of clinical jaundice and 36% of leukopenia (of less than 3,000 white cells) in cases treated with chlorpromazine, continued treatment maintains the danger of toxicity (7-9). In a group of younger acutely disturbed psychotic patients on moderate chlorpromazine dosage for one to seven weeks (10) it was found that more than half

¹ 555 Prospect Place, Brooklyn 38, N.Y.

the cases with originally normal liver function developed various impairments of function in the course of treatment, while half of those in whom original abnormalities were present developed worse abnormalities. Treatment had to be stopped in eight cases because of these toxic effects. In a group of alcoholics similarly treated(11) 12.6% of the patients with originally normal liver function developed some abnormality, usually an increased urinary urobilinogen excretion—which the authors did not regard as necessarily indicative of liver disease. In a large metropolitan hospital Werther and Korelitz(12) have been encountering about two cases a month of chlorpromazine jaundice, which they regard as a distinct syndrome. Among the complications of reserpine or chlorpromazine treatment more recently reported are: swallowing difficulties which can cause or contribute to asphyxial death, urinary retention and sinus tachycardia(13-17). Meprobamate can cause severe purpura, diarrhea, diplopia, dermatitis, hypotension, as well as withdrawal symptoms such as convulsions(18-20).

NOTES ON NEW DRUGS

Promazine, which is chlorpromazine less a chlorine atom (marketed as Sparine) has had a favorable reception. Similar in its action to chlorpromazine, it is both weaker and slower, but much less toxic, liver disturbances—as measured by alkaline phosphatase increases—being only one-sixth as frequent with promazine. Agitated paranooids and manic cases have responded well to it. Caution is advised when used on alcoholics, however, since convulsions may be induced(21-26).

Promethazine (Phenergan), an antihistaminic phenothiazine, similar in structure to chlorpromazine, causes some distressing side-effects such as drowsiness, dizziness and blurred vision, but is less depressant than chlorpromazine and can be usefully combined with it in the treatment of depressions(27-29).

Mepazine (Pacatal), another phenothiazine derivative, can induce agranulocytosis but is also generally less toxic than chlorpromazine. Simpson as well as Feldman

found it helpful in about 40 to 50% of an unpromising chronic schizophrenic case material. It brings on a special sense of subjective comfort, promotes sleep and appetite and relieves anxiety, hyperactivity and tension. Its atropine-like side-effects involve some danger of corneal ulceration. Rudy, Himwich and Tasher found it generally less effective than promazine. It is not especially depressant, is adapted to out-patient use and may be combined with chlorpromazine(30-35).

Prochlorperazine (Compazine) is almost as effective as chlorpromazine, of which it is an analogue, but is less toxic and is fairly rapid in its action. Thirty-six patients treated over a period of months showed no significant changes in liver function or blood count. Malitz and Hoch, however, call attention to the appearance of symptoms resembling retinitis pigmentosa, which justify caution(36, 37).

Perphenazine (Trilafon), an amino phenothiazine derivative, is similar in its action and side-effects to chlorpromazine, but of much greater potency. Though it may induce Parkinsonian symptoms, it is said to be relatively non-toxic, has little hypotensive effect and is thus suitable for the aged. Cahn and Lehmann warn against combining it with reserpine or using it in patients with marked obesity(38-41).

Acetylpromazine maleate (1522 C B), a new phenothiazine, is also similar in its action to chlorpromazine, but twice as potent and said to be much less toxic in equivalent effective dosage(42, 43).

Benactyzine (Suavetil), though moderately helpful, has many objectionable atropine-like side-effects and has been discontinued by several workers(44-48).

2-ethyl-crotonyl-urea (Nostyn) is a mild tranquilizer recommended by Ferguson for the relief of anxiety and tension in the elderly(49).

Methylpentynol (Oblivon), a higher alcohol whose hypnotic effect on animals had been noted by 1951(50), was later used to allay anxiety before dentistry, and now appears to have some general applicability for the relief of anxiety. Its side-effects are said to be mild and infrequent(51).

2-ethyl-3-propylglycidamide (Quiactin) is

generally quite unrelated to other sedatives or tranquilizers. Its tastelessness and apparently low toxicity suggest advantages. In doses of several grams a day it appears to allay irritability, especially in older patients, and may have general applicability in milder cases(52).

Reserpine is not fulfilling some of the earlier expectations. Malamud and his associates made an interesting attempt to make a differential study of the effect of various rauwolfia fractions on different symptoms. Reserpine proved to be by no means especially distinguished, and *rescinnamine* (Mod-eril) appeared generally more effective(53, 54).

Rice reports that *lithium salts*, first recommended years ago, are markedly beneficial in both manic and hypomanic states(55).

STEROIDS, TRYPANOSOMIASIS, NICOTINIC ACID, SHOCK

Laborit(56), who introduced chlorpromazine, also deserves credit for the first deliberate narcotic use of steroids in psychiatry. Bleuler(57) has recently reviewed the subject. The sleep induced by a drip infusion of Viadril, a hydroxypregnanedione derivative, is scarcely distinguishable from pentothal narcosis, but more closely resembles normal sleep(58, 59). Lemere(60) found 5-androstene-3 16-diol (Cetadiol) quite effective in relieving anxiety in alcoholics and neurotics. Teani(61) administered dehydroisoandrosterone (25 to 50 mg. a day for six weeks) in various clinical states, and found it especially helpful in phobic obsessive conditions, where he claims marked improvement in 50% and some improvement in another 40% of his cases.

Induced trypanosomiasis, which has been previously employed in the treatment of both general paresis and cancer, is now being used with some success in the treatment of psychoses. Gallais and Collomb(62) report that over half of their psychotic cases benefited from the procedure. The original description of the method by Astruc(63) contains a useful bibliography.

Hoffer(64), who has done so much basic work on the biology of schizophrenia, now recommends nicotinic acid (3 grams a day

for thirty days) as a beneficial adjunct to shock treatment.

A useful discussion of techniques for the administration of electroshock treatment suggests that the succession of atropine, followed by succinylcholine, followed by a petit mal and then a grand mal is the safest procedure to use, with O_2 freely administered before and after(65-68). An especially thoughtful plea for the humanization of shock treatment is made by Lieser(69), who insists that the treatment be given only before retiring, so that a suitable narcosis can be immediately induced that will lead on to normal sleep.

PSYCHIATRIC SPUTNIKS?

A special issue of the leading Soviet psychiatric journal(70) was recently devoted to chlorpromazine (called aminazine by the Russians), indicating a new receptivity to western psychiatric influences. An interesting consequence was the blending of Pavlovian techniques with our new clinical approaches. A critical review of this work by Le Guillant and Roelens will be found in the *Presse médicale*(71). This Russian work emphasizes the differential response of different types of individuals to chlorpromazine. In animals exposed to overwhelming stimulation, the resulting neurosis is characterized both by disorganization of conditioned responses and by states of general inhibition. Chlorpromazine is said to have a dual therapeutic role, since it relieves the inhibition (by a dampening effect on over-stimulation) while promoting a reorganization of the disordered responses. Barsa(72) in New York, on the basis of clinical observation, reached similar conclusions. A recent Polish report(73) regards chlorpromazine as superior to the various forms of shock treatment, especially in the treatment of paranoid and catatonic cases.

By means of a labeled radioisotope of chlorpromazine administered to rats, Fedorov and Shnol(74) found that accumulation took place largely in the lungs, with very little in the blood. Chlorpromazine readily penetrated the blood-brain barrier, with a special concentration in the cortex. After subcutaneous administration 97.4%

was excreted through the urine in four days. After oral administration, only 17% was absorbed, the remainder being excreted through the bowels without modification in eight or nine days.

Dimitrov(75) found that he could beneficially influence manic excitements by means of lumbar novocaine block.

European workers who share the Russian interest in sleep treatment now tend to assimilate chlorpromazine into sleep treatment procedures, and claim good results. A group of Belgian physicians(76), working with a large material of 350 cases, report that sleep treatment is improved by combining Amytal with chlorpromazine, reserpine or promethazine. They prefer this type of potentiated sleep treatment for non-psychotic conditions such as neuroses, anxiety or phobic states, neurasthenia or toxic alcoholism, but prefer the tranquilizing drugs alone for disturbed psychotic states, confusions or manic conditions. In general the newer drugs seem to have no great advantage over the familiar barbiturates in the type of case commonly encountered in office practice(77). Puech and Robin(78) made a serious attempt to discover the specific indications and relative value of chlorpromazine treatment and protracted sleep. Both forms of treatment seemed effective in acute delirium; chlorpromazine was especially helpful in handling agitation, but protracted sleep seems the method of choice for depressions. Several groups of workers endorse the value of combined barbiturate-chlorpromazine sleep treatment(79-82). Ey and Faure(83) recommend this combination for the management of anxious non-psychotic conditions, where the tranquilizer drugs alone are frequently ineffective. Harrer(84) has written a serious review of the techniques and range of indications for sleep treatment, and a recent issue of the German *Archiv für physikalische Therapie*(85) was devoted largely to the topic. Those who read German will welcome the appearance of a translation of Giliarovskii's basic work on electric sleep treatment(86, 87).

Systematic long term studies by Russian workers on the effect of chronic oxygen deprivation on higher nervous activities suggest that oxidative deficiencies may play a

role in schizophrenia(88). Consequently, treatment methods have been devised based on an acclimatization of patients to rarified atmosphere either by artificial exposure to reduced pressures or by residence at high altitudes. It is claimed the procedure is useful not only as treatment, but for purposes of prevention as well(89).

Similarly, desensitization to other noxious psychotogenic influences may explain the rationale of treatment with both mescaline and lysergic acid diethylamide. Fischer(90) noted the tendency to rapid development of tolerance to LSD, while Sandison and Whitelaw(91) found that a combination of LSD and chlorpromazine was useful in a wide variety of neurotic conditions as well as in resistant cases of schizophrenia.

BIBLIOGRAPHY

1. Ann. N. York Acad. Sc., 66: Art. 3, 1957.
2. L'Encéphale, 45: No. 4, 1956.
3. Arch. psicol. neur., 17: No. 1, 1956.
4. Brit. Med. J., July 13, 92, 1957.
5. World Health Org. Techn. Rep. Ser., No. 116, 1957.
6. Feldman, P. E.: Am. J. Psychiat., 114: 237, 1957.
7. Denber, H. C. B., and Bird, E. G.: Am. J. Psychiat., 113: 972, 1957.
8. Winkelman, N. W.: Am. J. Psychiat., 113: 961, 1957.
9. Cares, R. M., Asrican, E., Fenichel, M., Sack, P., and Severino, J.: Am. J. Psychiat., 114: 318, 1957.
10. Dickes, R., Schenker, V., and Deutsch, L.: New Engl. J. Med., 256: 1, 1957.
11. Small, M. D., Longarini, A. E., and Zamcheck, N.: New Engl. J. Med., 256: 932, 1957.
12. Werther, J. L., and Korelitz, B. I.: Am. J. Med., 22: 351, 1957.
13. Wardell, D. W.: Am. J. Psychiat., 113: 745, 1957.
14. Malitz, S., Hoch, P. H., and Lesse, S.: Am. J. Psychiat., 113: 540, 1956.
15. Farber, I. J.: Am. J. Psychiat., 114: 371, 1957.
16. Hollister, L. E.: Am. J. Psychiat., 114: 466, 1957.
17. Pachter, M., Am. J. Psychiat.: 113: 931, 1957.
18. Carmel, W. J., and Dannenberg, T.: N. Eng. J. Med., 255: 770, 1956.
19. Friedman, H. T., and Marmelzat, W. L.: J.A.M.A., 162: 628, 1956.
20. Tucker, K., and Wilensky, H.: Am. J. Psychiat., 113: 698, 1957.
21. Burdine, W. E., Shipley, T. E., and Papas, A. T.: J. M. Ass. Georgia, 46: 171, 1957.

22. Azima, H., and Durost, H.: *Canad. M. Ass. J.*, 76:442, 1957.
23. Lesse, S.: *Am. J. Psychiat.*, 113:984, 1957.
24. Lemere, F.: *Northwest M.*, 55:790, 1956.
25. Rudy, L. H., Himwich, H. E., and Tasher, D. C.: *Am. J. Psychiat.*, 113:979, 1957.
26. Azima, H.: *Canad. M. Ass. J.*, 76:442, 1957.
27. Samuels, A. S.: *Dis. Nerv. Syst.*, 18:183, 1957.
28. Erwin, H. J.: *Am. J. Psychiat.*, 113:783, 1957.
29. Barsa, J. A., and Kline, N. S.: *Am. J. Psychiat.*, 113:744, 1957.
30. Feldman, P. E., Bertone, J., and Panthel, H.: *Am. J. Psychiat.*, 113:842, 1957.
31. Simpson, R. W.: *J. Ment. Sci.*, 103:610, 1957.
32. Feldman, P. E.: *Am. J. Psychiat.*, 114:143, 1957.
33. Rudy, L. H., Himwich, H. E., and Tasher, D. C.: *Am. J. Psychiat.*, 113:979, 1957.
34. Bruckman, N., Kitchener, M., Saunders, J. C., and Kline, N. S.: *Am. J. Psychiat.*, 114:262, 1957.
35. Braun, M.: *Am. J. Psychiat.*, 113:838, 1957.
36. Vischer, T. J.: *N. Engl. J. Med.*, 256:26, 1957.
37. Malitz, S., and Hoch, P. H.: *Psychiat. Quart.*, 30:633, 1956.
38. Ayd, F. J.: *Dis. Nerv. Syst.*, 18:394, 1957.
39. Ayd, F. J. Jr.: *J. Am. Geriat. Soc.*, 5:92, 1957.
40. Mason-Browne, N. L.: *Am. J. Psychiat.*, 114:173, 1957.
41. Cahn, C. H., and Lehmann, H. E.: *Canad. Psychiat. A. J.*, 2:104, 1957.
42. Huguenard, P.: *Presse méd.*, 65:685, 1957.
43. Delay, J., Pichot, P., and Ropert, R.: *Presse méd.*, 65:491, 1957.
44. Maclean, R. E. G.: *M. J. Australia*, 1:67, 1957.
45. Gardes, M. A., and Laulan, M.: *Presse méd.*, 65:180, 1957.
46. Seager, C. P., and Leitch, A.: *Brit. M. J.*, No. 5006, 1407, 1956.
47. Lemere, F.: *Am. J. Psychiat.*, 114:371, 1957.
48. Kinross-Wright, V.: *Am. J. Psychiat.*, 114:73, 1957.
49. Ferguson, J. T.: *J. Am. Geriat. Soc.*, 4:1080, 1956.
50. Margolin, S., et al.: *Science*, 114:384, 1951.
51. Bockner, S.: *J. Ment. Sci.*, 103:218, 1957.
52. Feuss, C. D., and Cragg, L.: *Dis. Nerv. Syst.*, 18:29, 1957.
53. Bowes, H. A.: *Am. J. Psychiat.*, 113:530, 1956.
54. Malamud, W., Barton, W. E., Fleming, A. M., Middleton, P. M., Friedman, T. T., and Schleifer, M. J.: *Am. J. Psychiat.*, 114:193, 1957.
55. Rice, D.: *J. Ment. Sci.*, 102:604, 1956.
56. Laborit, H., Huguenard, P., Douzon, C., Weber, B., and Guittard, R.: *Presse méd.*, 63:1618, 1955.
57. Bleuler, M.: *Med. Klin.*, 51:1013, 1956.
58. Schneider, J., and Baumgartner, J.: *Anesthésie*, 13:258, 1956.
59. Mayrhofer, O., and Remes, I.: *Anaesthesist.*, 6:111, 1957.
60. Lemere, F.: *Am. J. Psychiat.*, 113:930, 1957.
61. Teani, E., *Minerva med. Tor.*, 47:1979, 1956.
62. Gallais, P., and Collomb, H.: *Presse méd.*, 65:155, 1957.
63. Astruc, J. F., *Contribution à l'étude de la schizophrénie. Aspects biologiques d'un essai thérapeutique par la trypanosomiase humaine*, Paris, 1954.
64. Hoffer, A.: *J. Clin. Exper. Psychopath.*, 18:131, 1957.
65. Impastato, D. J.: *Am. J. Psychiat.*, 113:461, 1956.
66. Karliner, W.: *Am. J. Psychiat.*, 113:753, 1957.
67. Edwards, A. T., and Listwan, I. A.: *Am. J. Psychiat.*, 114:76, 1957.
68. Marshall, S. V.: *Am. J. Psychiat.*, 114:77, 1957.
69. Lieser, H.: *Deut. med. Wschr.*, 81:1503, 1956.
70. *Zh. Nevropat. Psikhiat.*, February, 1956.
71. Le Guillant, L., and Roelens, R.: *Presse méd.*, 64:1225, 1956.
72. Barsa, J. A.: *Am. J. Psychiat.*, 114:74, 1957.
73. Petelski, M.: *Polski tygod. lek.*, 11:1366, 1956.
74. Fedorov, N. A., and Shnol, S. E.: *Zh. Nevropat. Psikhiat.*, 56:139, 1956.
75. Dimitrov, P.: *Zh. nevropat. psikhiat.*, 56:555, 1956.
76. Divry, P., Bobon, J., and Collard, J.: *Acta neur. psychiat. belg.*, 57:185, 1957.
77. Raymond, M. J., Lucas, C. J., Beesley, M. L., and O'Connell, B. A.: *Brit. M. J.*, No. 5036, p. 63, 1957.
78. Puech, J., and Robin, C.: *Sem. hôp.*, 32:3252, 1956.
79. Kleinsorge, H., and Rösner, K.: *Ther. Gegenwart*, 95:441, 1956.
80. Martini, F.: *Riv. pat. nerv.*, 77:549, 1956.
81. Lienau, C.: *Münch. Med. Wschr.*, 99:80, 1957.
82. Pfeil, K.: *Medizinische*, No. 13, 463, 1957.
83. Ey, H., and Faure, H.: *Internat. Rec. M.*, 170:1, 1957.
84. Harrer, G.: *Wien. klin. Wschr.*, 69:109, 1957.
85. *Arch. phys. Ther.*, 9: No. 1, 1957.
86. Giljarowski, W. A.: *Elektroschlaf*, Verlag Volk und Gesundheit, Berlin, 1956.
87. Vranski, V., and Ivanov, V.: *Suvrem. med.*, 7:78, 1956.
88. Sirotinin, N. N., pp. 38-46 in: *Visshaia nervnaia deiatelnost i kortiko-viszeralnie vzaimnosheniia*, Kiev, 1955.
89. Nyirő, G., Péter, A., and Szák, J.: *Orv. hetil.*, 97:712, 1956.
90. Fischer, R.: *J. Ment. Sci.*, 103:392, 1957.
91. Sandison, R. A., and Whitelaw, J. D.: *J. Ment. Sci.*, 103:332, 1957.

PSYCHOSURGERY

WALTER FREEMAN, M.D.¹

Several significant contributions have appeared during the past year. According to Yokoi(17) gliosis developed in the major pathways severed by lobotomy. The superior longitudinal fasciculus could thus be followed as far as the occipital lobes on both sides even after unilateral lobotomy. The fasciculus cinguli was traceable to the corresponding occipital lobe. The fasciculus uncinate could be followed into the temporal lobe where it spread to the hippocampus and the amygdaloid nucleus. Gliosis increased with the length of the postoperative period.

Electroencephalographic changes were also progressively altered, as disclosed by Adams, Gibbs and Gibbs(1). After 18 months some tracings during sleep showed asynchrony of slow activity in the frontal areas, and by 3 years this was always present. They assumed that this change was due to delayed degeneration of commissural fibers which link certain nuclei in the left and right thalamus. Gaches and Dondey(6) showed that the EEG signs of local damage disappeared while paroxysmal disturbances might persist or even increase. Garcia Austt and co-workers(7) studied cortical activity during and after isolation of the frontal cortex. There was immediate slowing in the frontal areas with superimposed low voltage fast activity that became stabilized after 5 to 10 minutes. Patients reoperated upon several years afterwards showed the same type of activity in the frontal poles, even though no seizures had occurred.

Angiography long after lobotomy (Morrello and Barteczek) (13) showed decrease in vascularity of the frontal lobes with absence of ascending veins.

Personality changes following temporal lobectomy for epilepsy were studied by Hill *et al.*(9). There was loss of learning ability in those whose dominant hemisphere was resected. At the same time aggression was controlled in half the cases, with insight into the change, but a number of the patients turned their aggression inward and became depressed, occasionally to the point of requiring electroconvulsive shock. Sexuality

was often increased but perverse tendencies were better controlled. Increased warmth of social relationship was frequently noted. Five patients among 27 continued to have seizures and were psychologically worse.

Vivid daydreaming and confusion between fantasy and reality after cingulectomy were studied by Whitty and Lewin(16). The phenomena resembled temporal lobe attacks. They were not observed after frontal operation, and cleared by the third day.

Long-term follow-up by Freeman(4) showed that 70% to 80% of the lobotomized schizophrenics were out of the hospital 5 to 10 years after operation, as compared with 80% of the affectives and 90% of the psychoneurotics. The figures were twice as high among private patients as they were in state hospital patients, mostly because the private patients were operated upon after shorter periods of hospitalization. "Lobotomy can make its effect felt as far as hospital population is concerned when it is performed as a measure for restoring patients to socially acceptable behavior while their families are still interested and willing to receive them."

Gardner(8), Fiamberti(3), Niswander, *et al.*(14) had greater success in getting patients out of the hospital, or keeping them out, than did Scherer and Trehub(15). However, the last authors estimated their results less than 6 months after operation. Stabilization of the lobotomized patients requires at least two years.

Twelve patients with ulcerative colitis were treated by lobotomy by Cattani, *et al.*(2) with recovery in 9. With Frumusan and Bucaille(5) he also reported 5 patients with intractable gastric and duodenal ulcers, 4 of whom were relieved. Serial roentgen studies showed healing of the lesions.

Kalinowsky(10) stressed the facilitation of transference, "which can be a much healthier and more prosperous relationship than before lobotomy because the relief from anxiety makes such patients less dependent, and the handling of the transference situation becomes more sound than it had been before. . . . The therapist sees a great change toward improvement in a patient with whom

¹ Los Alto, Calif.

real problems actually have not been worked out at all. The therapist must accept the fact, however, that such working out of the patient's conflicts is no longer needed to an extent considered necessary in psychotherapy with an unoperated patient. . ."

Lesse(12) stressed the need for establishing complete dependency of the schizophrenic patient upon the therapist before undertaking a prolonged brain operation under local anesthesia. The therapist then could control the patient with a minimum of interfering drug effects.

BIBLIOGRAPHY

1. Adams, C. L., Gibbs, E. L., and Gibbs, F. A.: *Arch. Neurol. & Psychiat.*, 77:237, March 1957.
2. Cattán, R., Carasso, R., Frumusan, P. Nataf, P., Soupault, R., and Bucaille, M.: *Sem. hôp. Par.*, 33:507, 10 February 1957.
3. Fiamberti, A. M.: *L'apporto della psicoterapia alle cure biologiche delle malattie mentali. Atti del convegno nazionale sulle moderne terapie neuropsichiatriche.* Trapani, Tipografia Cartograf. 1956.
4. Freeman, W.: *Am. J. Psychiat.*, 113:877, April 1957.
5. Frumusan, P., Cattán, R., and Bucaille, M. *Sem. hôp. Par.*, 33:521, 10 February 1957.
6. Gaches, J., and Dondey, M.: *Rev. neur.*, 94:866, June 1956.
7. García Austt, E., Arana Iniguez, R., Migliaro, E. F., and Pérez Ackard, L.: *Acta Neurol. Latinoamer.*, 3:9, 1957.
8. Gardner, A.: *Am. J. Psychiat.*, 114:140, August 1957.
9. Hill, D., Pond, D. A., Mitchell, W., and Falconer, M. A.: *J. Ment. Sc.*, 103:18, January 1957.
10. Kalinowsky, L. B.: *Psychosomat. M.*, 18:399, September-October 1956.
11. LeBeau, J., and Choppy, M.: *Encéphale.*, 45:242, 1956.
12. Lesse, S.: *Anesth. & Analgesia.*, 36:41, January-February 1957.
13. Morello, A., and Barteczek, A.: *Psychiat. Q.*, 31:93, January 1957.
14. Niswander, G. D., Cummings, W. E., Oakey, K. B., and Holt, E. K.: *Dis. Nerv. Sys.*, 18:294, August 1957.
15. Scherer, I. W., and Trehub, A.: *Dis. Nerv. Sys.*, 18:55, February 1957.
16. Whitty, C. M. W., and Lewin, W.: *Brain.*, 80:72, March 1957.
17. Yokoi, S.: *J. Neuropath. Exp. Neurol.*, 16:251, April 1957.

CHILD PSYCHIATRY. MENTAL DEFICIENCY

LEO KANNER, M. D., AND LEON EISENBERG, M. D.¹

The Second International Congress for Psychiatry, held in Zürich September 1-7, 1957, had for its main theme "the present status of knowledge about the group of schizophrenias." Five full sessions were devoted to childhood schizophrenia and one to schizophrenia in adolescents. On the whole, there was a serious and honest effort to exchange ideas and information. At the invitation of the European Union of Pedopsychiatrists, papers on the status of childhood schizophrenia from the Swiss, French, German, American, and Italian viewpoints were given by Tramer, Heuyer, Villinger, Kanner, and Bollea and DeSanctis, respectively.

Books and Pamphlets.—Villinger(1) edited an important German yearbook of child psychiatry and related areas. Balser(2) edited and Jersild(3) and Tanner(4) wrote significant volumes on complementary aspects of adolescence. Funkenstein and Wilkie(5) prepared a useful bibliography on

student mental health. Gardner(6) presented a second in the valuable series of orthopsychiatric case studies. Tanner and Inhelder(7) edited an international symposium on child development. New editions of Kanner's text on child psychiatry(8) and Tredgold's on mental deficiency(9) brought two standard works up to date. Bruch's comprehensive treatise on obesity(10) and Whitehorn's thoughtful Salmon Lectures on medical education(11) proved rewarding reading. Lowenfeld's monograph on blind children(12), intended for parents, aided the professional reader as well. The Porter Sargent Directory of institutions for exceptional children(13) continued to meet a need. Special note should be taken of 3 publications issued by the Group for the Advancement of Psychiatry: one analyzed the psychological consequences of segregation both for the victim of prejudice and for its perpetrator and considered problems in the process of desegregation(14); a second presented as

¹ Baltimore, Md.

lucid a statement as is available anywhere on the diagnostic process in child psychiatry (15); a third outlined suggestions for counselling teachers on mental hygiene (16).

Publications.—Accumulating evidence on the consequences of mother-child separation has necessitated modification of the more extreme positions taken on the question. Andy, in comparing delinquent and non-delinquent adolescents (17), found no greater incidence of early separation in his delinquent group and emphasized the significance of faulty *paternal* relationships. Kaffman's study of 400 Kibbutz children (18) failed to confirm Caplan's clinical impression (19) that emotional disturbances attributable to lack of mothering were common in this group. No difference was found by Hopper and Pinneau (20) in the frequency of regurgitation in infants in a controlled study of the effect of additional "stimulation." Bowlby and coworkers (21), after a thorough study of children institutionalized at an early age for tuberculosis, commented: "Statements implying that children who are brought up in institutions or who suffer other forms of serious privation and deprivation in early life *commonly* develop psychopathic or affectionless characters are seen to be mistaken. . . . Outcome is immensely varied. . . ." This is not to imply, however, that separation is without important sequelae. Heinicke (22), in a small but careful quantitative study of the effects of temporary separation, demonstrated significant changes in behavior. The excellent studies by Gofman, *et al.* (23-24) illustrated, and suggested means of modifying, the emotional turbulence in children and their parents secondary to hospitalization. Stroder and Geisler (25) contrasted the effects of long and short term hospitalization. Forgas (26) and Rheingold (27) studied perceptual stimulation in animals and social stimulation in infants, respectively, and Gewirtz (28) presented a theoretical framework for research on emotional dependence in the young child. The problem of deprivation was reviewed by Ragu-Frey (29), Bennholdt-Thomsen (30) and Lutz (31).

Childhood schizophrenia was the subject of continuing investigation. Goldfarb and coworkers (32-34) examined "receptor preferences," patterns of orientation and the face-hand test (M. Bender) in schizophrenic

children. Freedman and L. Bender (35), Masterson (36) and Eisenberg (37) reported on the long term course of the illness. Morris, *et al.* (38) affirmed the surprisingly low incidence of schizophrenia in the later careers of shy, withdrawn children (39). Stern (40) described pre-schizophrenic states. Lidz, *et al.* (41) pursued their investigations of the family environment of the schizophrenic, a topic critically reviewed by Delay, *et al.* (42). Research techniques (43), psychotherapy (44), inpatient care (45), nonresidential schooling (46), the Akerfeldt test (47), and unevenness of growth (48) were examined in relation to the schizophrenic child.

Constitutional and organic problems were given important emphasis. Grossman and Greenberg's excellent study (49) demonstrated the inter-subject and intra-subject variability of autonomic functions in the new born. No correlation was found between EEG patterns and Kretschmer's somatotypes in adolescents (50). The relationship between psychomotor epilepsy and psychotic states (51) and the responsiveness to surgical excision of cortical tissue (52) headed a list of important papers on epilepsy which considered psychic factors (53), conduct disorders (54), and mental abilities (55) in such patients. Also significant were studies on the treatment and outcome of lead poisoning (56-58) and hypothyroidism (59), EEG abnormalities in uncomplicated measles (60), the results of cortisone treatment of measles encephalitis (61), the relationship between Rh incompatibility and aphasia (62), and the value of a realistic approach to counselling parents of palsied children (63). A case presentation was employed by Mora (64) as a focus for the discussion of the borderline between symptoms of brain damage and psychosis. An attempt was made to provide a conceptual framework for understanding the symptomatology of the brain-injured child (65).

Stevenson, in a provocative article (66), called for a reexamination of the common assumption that the personality is more plastic in childhood. Levy's incisive critique of the motivational bias of the psychiatrist (67) brought to the fore important issues raised in another form by Whitehorn's now classic distinction between "meaning" and "cause" (68). Starr (69) presented a basis for re-

aligning child guidance practice to the utilization of non-psychiatric community agency skills in accordance with the need of particular family units. Glidewell, *et al.*(70) demonstrated a reliable relationship between estimates of illness based on mothers' reports of number, duration and severity of symptoms and actual clinical examination of their children. Theoretical issues were dealt with in papers on Horney's "basic conflict" (71), psychoanalysis and child development (72), ethology(73), medical genetics(74), and group behavior(75).

Gardner(76) compared the adolescent phase of growth in individuals and societies. Miller(77) proposed methods of resolving the special problems posed by treating adolescents in an adult mental hospital. Delinquency was discussed in terms of motivation and frustration(78), EEG analysis(79), acting out (80-81), role theory(82), group behavior(83) and the decision for residential treatment(84). A follow-up analysis by Adamson and Dunham(85) revealed that the "poor-risk" delinquents referred to clinic by courts showed no evidence of benefit from treatment. Johnson and Robinson(86) considered the prophylactic implications for the family physician of their studies on the psychopathology of sexual deviants. Landis found few residual disturbances among children exposed to adult sex offenders(87).

Methodologic problems in sociologic and epidemiologic investigations of mental disorder were analyzed by Dunham(88) and Kramer(89). Freedman and Hollinshead(90) presented a provocative discussion of the interaction between neurosis and social class. Rennie, *et al.*(91) and Pasamanick, *et al.*(92), utilizing different diagnostic criteria, came to different conclusions concerning the prevalence of mental disorder in urban populations. The impact on mental health of quality of housing(93), a society under stress(94) and sibling order(95) were discussed. The relationships between outcome of psychotherapy and social(96) and motivational(97) factors were approached experimentally. Woodward(98) discussed the implications of social health for orthopsychiatry and Habermann(99) projected a cultural and psychological analysis of religious movements among children. Bakwin

(100) and Parrish(101) considered the epidemiology of suicide among children and adolescents, respectively, and Jacobziner(102) of accidents.

A number of clinical syndromes were subjected to careful study: encopresis(103), dysautonomia(104-107), anorexia nervosa in the male child(108), school phobia(109-112), the hot-rod driver(113), mutism(114), and the reaction to disaster(115). Laufer, *et al.* demonstrated a relation between the hyperkinetic behavior syndrome, photometrazol EEG thresholds(116) and the effectiveness of amphetamine(117). Statistically controlled studies of children's drawings(118) and structured doll play(119) as tools for clinical diagnosis were presented. Changes in teachers' attitudes(120), the effect of classroom organization on children's behavior(121) and the pedagogic implications of "depth psychology"(122) were subjects of contributions. Pediatric interest in psychiatric problems was indicated by articles on the pediatric examination(123), colic(124), obesity(125), adoptions(126), night-waking(127), training of pediatricians(128-131), pediatric attitudes to psychologic medicine(132), developmental studies(133) and by Academy of Pediatrics seminars on emotional problems in children(134) and childhood problems in relation to the family(135). For a more extended discussion of the issues touched upon in this and the concluding section of this review, the reader is referred to a recent article which has appeared elsewhere(136).

MENTAL DEFICIENCY

The 4th Edition of the A.A.M.D. statistical manual(137) outlined a basis for an etiologic classification of the mental deficiencies based on a dynamic interpretation of current knowledge. The Proceedings of the First Winfield Conference on Research(138) provided a permanent record of a series of stimulating papers and discussions. The limitations of the reductionist approach to mental deficiency were analyzed by Cantor and Cromwell(139). Benoit(140) presented a theoretical analysis of Hebb's model of neural organization as it applies to educa-

retardation in a metropolitan area was studied by Goodman, *et al.* (141), while Heiner (142), Ferguson (143), Vaughan (144) and Chatagnon, *et al.* (145) took up community problems in connection with the detection and rehabilitation of the retarded child. Brunet (146) compared the intellectual development of children with differing socioeconomic home and foster home situations. Coleman and Provence (147) described "hospitalism" in two infants living with their own but inadequate families and Woodward and Siegel (148) the emotional problems found in retarded pre-school children. A careful study by Mundy (149) demonstrated significant I.Q. increments following removal of 100 retarded patients in the community.

Pharmacotherapy was asserted to be of definite value in the treatment of behavior disorders in institutionalized retarded patients in studies by Sprogis, *et al.* (150), Timberlake, *et al.* (151), Wolfson (152), Pallister, *et al.* (153), Jensen (154), Kucera (155), Tarjan, *et al.* (156), and Horenstein (157). Raden performed the considerable service of presenting the English translation of a clinical lecture by Korsakov on microcephaly (158). Pediatric interest in the problems of retarded children was indicated by a symposium on the subject under the chairmanship of Yannet (159).

Exciting research in the metabolic abnormalities associated with mental deficiency syndromes produced significant new advances. Biochemical specificities in galactosemia were examined by Anderson, *et al.* (160), Eisenberg, *et al.* (161) and Kalckar (162). The demonstration by Isselbacher (163) of an accessory pathway for galactose metabolism provided a possible explanation for the remission of the intolerance to galactose with increasing age in the galactosemic patient. Mitoma, *et al.* (164) and Wallace, *et al.* (165) were able to establish the fact that an essential enzyme, necessary for the parahydroxylation of phenylalanine and normally found in liver, is absent in the phenylketonuric. The failure of this pathway may result in the diversion of phenylalanine metabolism to orthotyrosine, the degradation of which to o-tyramine may be responsi-

ble for CNS damage (166). Hsia, (167-168) were able to identify zygous carriers of phenylketonuria by phenylalanine tolerance tests. Hsia (169) has reviewed the entire problem of the laboratory detection of the heterozygote. The favorable effect of phenylalanine restricted diets in phenylketonurics was studied by Horner, *et al.* (170) and Law, *et al.* (171). Paine and Hsia (172) examined the dietary requirement and tolerance of the phenylketonuric for phenylalanine. The clinical syndrome itself was reviewed by Wright and Tarjan (173) and by Paine (174).

Walker (175) described the use of dermal configurations in the diagnosis of mongolism. Allen and Baroff (176) analyzed 39 cases of mongolism in twins and concluded that both a genetically predisposed embryo and an enduring change in the reproduction system conjoin to produce the syndrome. Gallagher (177) compared the performance of brain-injured and non-brain-injured mentally retarded children on specific psychologic tests. Perlstein and Hood (178) discussed intelligence and development milestones in infantile spastic hemiplegia. Hoffman and Riepenhoff reviewed the problem of pigmentary retinal lipid neuronal heredodegeneration (179).

BIBLIOGRAPHY

1. Villinger, W. (ed.): *Jahrbuch für Jugendpsychiatrie und ihre Grenzgebiete*. Bern: Hans Huber, 1956.
2. Balser, B. H. (ed.): *Psychotherapy of the Adolescent*. New York: International Universities Press, 1957.
3. Jersild, A. T.: *The Psychology of Adolescence*. New York: Macmillan, 1957.
4. Tanner, J. M.: *Growth at Adolescence*. Springfield: C. C Thomas, 1956.
5. Funkenstein, D. H., and Wilkie, G. H.: *Student Mental Health: An Annotated Bibliography 1936-1955*. London: W.F.M.H., 1956.
6. Gardner, G. E. (ed.): *Case Studies in Childhood Emotional Disabilities II*. N. Y.: American Orthopsychiatric Association, 1956.
7. Tanner, J. M., and Inhelder, B. (ed.): *Discussions on Child Development* (2 vols.). New York: International Universities Press, 1957.
8. Kanner, L.: *Child Psychiatry*. 3rd Ed. Springfield: C. C Thomas, 1957.
9. Tredgold, R. F., and Soddy, K.: *Mental Deficiency*. Baltimore: Williams & Wilkins, 1956.
10. Bruch, H.: *The Importance of Overweight*. New York: Norton, 1957.

1. Feld, B.: *Our Blind Children*. Springfield, Ill.: C. Thomas, 1956.
2. Hayra, N. E. (ed.): *Directory for Facey-Children*. Boston: Porter Sargent, 1957.
3. *Psychiatric Aspects of School Segregation*. New York: 1957.
4. The *Psychiatric Aspects of School Segregation*. New York: 1957.
5. *Psychiatrist in Mental Health Education*. Ibid. Report #35, November, 1956.
6. Andy, R. G.: *Brit. J. Delinquency*, 8: 34.
7. Kaffman, M.: *Investigation of the Behavior Kibbutz Children*. Institute for Research in Education. Israel: 1956.
8. G. in Senn, M. (ed.): *Problems of Youth and Childhood*, 7th Conference, N. Y.: 1956.
9. *Child*, 1957.
10. *Child*, 1957.
11. *Child*, 1957.
12. *Child*, 1957.
13. *Child*, 1957.
14. *Child*, 1957.
15. *Child*, 1957.
16. *Child*, 1957.
17. *Child*, 1957.
18. *Child*, 1957.
19. *Child*, 1957.
20. *Child*, 1957.
21. *Child*, 1957.
22. *Child*, 1957.
23. *Child*, 1957.
24. *Child*, 1957.
25. *Child*, 1957.
26. *Child*, 1957.
27. *Child*, 1957.
28. *Child*, 1957.
29. *Child*, 1957.
30. *Child*, 1957.
31. *Child*, 1957.
32. *Child*, 1957.
33. *Child*, 1957.
34. *Child*, 1957.
35. *Child*, 1957.
36. *Child*, 1957.
37. *Child*, 1957.
38. *Child*, 1957.
39. *Child*, 1957.
40. *Child*, 1957.
41. *Child*, 1957.
42. *Child*, 1957.
43. *Child*, 1957.
44. *Child*, 1957.
45. *Child*, 1957.
46. *Child*, 1957.
47. *Child*, 1957.
48. *Child*, 1957.
49. *Child*, 1957.
50. *Child*, 1957.
51. *Child*, 1957.
52. *Child*, 1957.
53. *Child*, 1957.
54. *Child*, 1957.
55. *Child*, 1957.
56. *Child*, 1957.
57. *Child*, 1957.
58. *Child*, 1957.
59. *Child*, 1957.
60. *Child*, 1957.
61. *Child*, 1957.
62. *Child*, 1957.
63. *Child*, 1957.
64. *Child*, 1957.
65. *Child*, 1957.
66. *Child*, 1957.
67. *Child*, 1957.
68. *Child*, 1957.
69. *Child*, 1957.
70. *Child*, 1957.
71. *Child*, 1957.
72. *Child*, 1957.
73. *Child*, 1957.
74. *Child*, 1957.
75. *Child*, 1957.
76. *Child*, 1957.
77. *Child*, 1957.
78. *Child*, 1957.
79. *Child*, 1957.
80. *Child*, 1957.
81. *Child*, 1957.
82. *Child*, 1957.
83. *Child*, 1957.
84. *Child*, 1957.
85. *Child*, 1957.
86. *Child*, 1957.
87. *Child*, 1957.
88. *Child*, 1957.
89. *Child*, 1957.
90. *Child*, 1957.
91. *Child*, 1957.
92. *Child*, 1957.
93. *Child*, 1957.
94. *Child*, 1957.
95. *Child*, 1957.
96. *Child*, 1957.
97. *Child*, 1957.
98. *Child*, 1957.
99. *Child*, 1957.
100. *Child*, 1957.

82. Parker, S.: *Brit. J. Delinquency*, 7: 265, 1957.
83. Scott, P.: *Ibid.*, 7: 4, 1956.
84. ... D. T.: *Ibid.*, 7: 27, 1956.
85. Adamson, L. M., and Dunham, H. W.: *Amer. Sociol. Rev.*, 21: 312, 1956.
86. Johnson, A. M., and Robinson, D. B.: *J.A.M.A.*, 164: 1559, 1957.
87. Landis, J. T.: *Psychiat. Quart.*, 30: 91, 1956.
88. Dunham, H. W.: *Int. J. Social Psychiat.*, 3: 7, 1957.
89. Kramer, M.: *Am. J. Pub. Hlth.*, 47: 826, 1957.
90. Freedman, L. Z., and Hollinshead, A. B.: *Am. J. Psychiat.*, 113: 769, 1957.
91. Rennie, T. A. C., *et al.*: *Ibid.*, 113: 831, 1957.
92. Pasanick, B., *et al.*: *Am. J. Pub. Hlth.*, 47: 923, 1957.
93. Wilner, D. M., *et al.*: *Ibid.*, 48: 736, 1956.
94. Alexander, T., and Anderson, R.: *Behavioral Science*, 2: 46, 1957.
95. Raychandhuri, A. K.: *J. Nerv. Ment. Dis.*, 124: 478, 1956.
96. Frank, J. D., *et al.*: *Arch. Neurol. Psychiat.*, 77: 283, 1957.
97. Gholman, I. H., *et al.*: *Am. J. Psychol.*, 11: 589, 1957.
98. Woodward, L. H.: *Am. J. Orthopsychiat.*, 27: 445, 1957.
99. Hubermann, P.: *Archiv für Kinderheilkunde*, 154: 138, 1956.
100. Bakwin, H.: *J. Ped.*, 50: 749, 1957.
101. Parrish, H. M.: *Yale J. Biol. Med.*, 29: 585, 1957.
102. Jacobziner, H.: *A.M.A. J. Dis. Child*, 93: 647, 1957.
103. Anthony, E. J.: *Brit. J. Med. Psychol.*, 30: 146, 1957.
104. Freedman, A. M., *et al.*: *Am. J. Orthopsychiat.*, 27: 96, 1957.
105. Linde, L. M.: *Pediatrics*, 18: 692, 1956.
106. de Hirsch, K., and Jansky, J. J.: *J. Speech & Hearing Disorders*, 21: 450, 1956.
107. Frischknecht, W.: *Schweiz. med. Wschr.*, 86: 42, 1956.
108. Falstein, E. I.: *Am. J. Orthopsychiat.*, 26: 751, 1956.
109. Talbot, M.: *Ibid.*, 27: 286, 1957.
110. Coolidge, J. C., *et al.*: *Ibid.*, 27: 296, 1957.
111. Johnson, A. M.: *Ibid.*, 27: 307, 1957.
112. Estes, H. R., *et al.*: *Am. J. Psychotherapy*, 10: 682, 1956.
113. Neaves, J. C., and Winokur, G.: *Bull. Men. Clinic*, 21: 28, 1957.
114. Förster, E.: *Zeitschrift für Kinderpsychiatrie*, 23: 175, 1956.
115. Bloch, D. A., *et al.*: *Am. J. Psychiat.*, 113: 416, 1956.
116. Laufer, M. W., *et al.*: *Psychosom. Med.*, 19: 38, 1957.
117. Laufer, M. W., and Denhoff, E.: *J. Ped.*, 50: 463, 1957.
118. Burbury, W. M.: *J. Ment. Sci.*, 103: 487, 1957.
119. Anthony, E. J., and Bene, E.: *Ibid.*, 103: 541, 1957.
120. Hunter, E. C.: *Mental Hygiene*, 41: 3, 1957.
121. Henry, J.: *Am. J. Orthopsychiat.*, 27: 117, 1957.
122. Stransky, E.: *Archiv für Psychiatrie und Nervenkrankheiten*, 195: 466, 1957.
123. Kimball, E. R.: *J.A.M.A.*, 160: 1033, 1956.
124. ...: *Pediatrics*, 18: 828, 1956.
125. ... H. H.: *Ibid.*, 20: 549, 1957.
126. Karelitz, S.: *Ibid.*, 20: 366, 1957.
127. Moore, T., *et al.*: *Arch. Dis. Child*, 32: 333, 1957.
128. Jensen, R. A., and Engstrom, D. P.: *Am. J. Psychiat.*, 113: 728, 1957.
129. Hunt, A. D., and Parmet, R.: *Pediatrics*, 19: 462, 1957.
130. Wallgren, A.: *Acta Paediatrica*, 46: 503, 1957.
131. Blitzer, J. R., and Wilson, J. B.: *A.M.A. J. Dis. Child*, 94: 143, 1957.
132. Levine, M. I., and Bell, A. I.: *Pediatrics*, 18: 803, 1956.
133. Washburn, A. H.: *A.M.A. J. Dis. Child*, 94: 46, 1957.
134. Langford, W. S., *et al.*: *Pediatrics*, 19: 1129, 1957.
135. Kanner, L., and Eisenberg, L.: *Ibid.*, 20: 155, 1957.
136. Eisenberg, L.: *J. Ped.*, 51: 334, 1957.
137. *Statistical Manual of the American Association for Mental Deficiency*, 4th Edition, 1957.
138. Wright, M. E., and Croley, H. T. (ed.): *Research in the Management of the Mentally Retarded Child. First Winfield Conference. Washington: N.I.M.H., 1957.*
139. Cantor, G. N., and Cromwell, R. L.: *Am. J. Ment. Def.*, 61: 461, 1957.
140. Benoit, E. P.: *Ibid.*, 61: 497, 1957.
141. Goodman, M. B., *et al.*: *Am. J. Pub. Hlth.*, 46: 702, 1956.
142. Heiser, K. F.: *Am. J. Orthopsychiat.*, 27: 484, 1957.
143. Ferguson, R. G.: *Ibid.*, 27: 499, 1957.
144. Vaughan, W. T.: *Am. J. Pub. Hlth.*, 47: 706, 1957.
145. Chatagnon, C., *et al.*: *Annales Medico-Psychologiques*, 115: 35, 1957.
146. Brunet, O.: *Enfance*, 1: 85, 1956.
147. Coleman, R. W., and Provence, S.: *Pediatrics*, 19: 285, 1957.
148. Woodward, K. F., and Siegel, M. G.: *Ibid.*, 19: 119, 1957.
149. Mundy, L.: *Brit. J. Med. Psychol.*, 30: 194, 1957.
150. Sprogis, G. R., *et al.*: *Am. J. Ment. Def.*, 61: 737, 1957.
151. Timberlake, W. H., *et al.*: *Ibid.*, 62: 61, 1957.
152. Wolfson, I. N.: *Ibid.*, 62: 276, 1957.
153. Pallister, P. D., and Stevens, R. R.: *Ibid.*, 62: 267, 1957.
154. Jensen, E. S.: *Acta Psychiatrica et Neurologica Scandinavica*, 32: 17, 1957.

114. Finkler, O.: *Zeitschrift für Kinderpsychiatrie*, 24: 75, 1957.
115. Lachman, G. et al.: *A.M.A. J. Dis. Child*, 94: 195, 1957.
116. Hirschstein, S.: *Am. J. Ment. Def.*, 61: 525, 1957.
117. Kozlov, S. S.: *Ibid.*, 62: 188, 1957.
118. Yarnet, H.: *J. Ped.*, 50: 226, 1957.
119. Anderson, E. P., et al.: *Science*, 125: 113, 1957.
120. Eisenberg, F., et al.: *Ibid.*, 125: 116, 1957.
121. Kalckar, H. M.: *Ibid.*, 125: 105, 1957.
122. Isaksson, K. J.: *Ibid.*, 126: 62, 1957.
123. Mitoma, C., et al.: *Proc. Soc. Exper. Biol. Med.*, 94: 634, 1957.
124. Wallace, H. W., et al.: *Ibid.*, 94: 632, 1957.
125. Mitoma, C., et al.: *J. Pharmacol. & Exper. Therap.*, In Press.
126. Hsia, D. Y.-Y., et al.: *Acta genetica*, 7: 186, 1957.
127. ———: *Nature*, 178: 1279, 1956.
128. Hsia, D. Y.-Y.: *Am. J. Human Genetics*, 9: 185, 1957.
129. Horner, F. A., et al.: *A.M.A. J. Dis. Child*, 93: 615, 1957.
130. Low, N. L., et al.: *Arch. Neurol. Psychiat.*, 77: 350, 1957.
131. Paine, R. S., and Hsia, D. Y.-Y.: *A.M.A. J. Dis. Child*, 94: 224, 1957.
132. Wright, S. W., and Tarjan, G.: *Ibid.*, 93: 405, 1957.
133. Paine, R. S.: *Pediatrics*, 20: 300, 1957.
134. Walker, N. F.: *J. Ped.*, 50: 19, 1957.
135. Allen, G., and Baroff, G. S.: *Acta Genetica*, 5: 294, 1955.
136. Gallagher, J. J.: *Mgr. Soc. Res. Child Developm.*, 22: #2, 1957.
137. Perlstein, M. A., and Hood, P. N.: *Am. J. Ment. Def.*, 61: 534, 1957.
138. Hoffman, J., and Riepenhoff, J. P.: *Ibid.*, 62: 67, 1957.

CLINICAL NEUROLOGY

WILLIAM H. TIMBERLAKE¹

This section will review contributions to the understanding, diagnosis and treatment of neurological conditions. Presumed new entities and techniques will be noted. Advances in neurophysiology, neurochemistry and neurosurgery will be discussed when they seem to have clinical relevance.

Circulation.—When there are signs of pulmonary and cardiac failure, increasing intracranial pressure may be due to severe pulmonary insufficiency rather than brain tumor (1, 2). Hypercapnia causes the impaired consciousness and combines with the hypoxia to cause the papilloedema. It is not certain what causes the headache or the accompanying action tremor and arrhythmic loss of support of raised extremities like "liver flap." Treatment with oxygen may cause death by removing the remaining stimulus of the respiratory center. Rather, a respirator should be used to blow off the carbon dioxide. With the patient in the respirator, oxygen can be given safely. Morphine or curare may be needed to help the patient synchronize with the respirator.

Thrombosis of the internal carotid artery was found in 1% of 3,000 angiograms by Torma, et al. (3). Thrombosis commonly occurred in the fourth or fifth decade and usu-

ally was preceded by transient headaches, weakness or paraesthesia. Three patients recovered fully, 13 improved, 8 did not improve and 6 died. The pineal gland and ventricles may be displaced to the opposite side (4).

Heyman, et al. (5) and Rand (6) applied increasing pressure with a tonometer to the globe of the eye. Pulsation appeared in the retinal arteries at the diastolic and disappeared at the systolic level of pressure in the ophthalmic artery. Compression of the carotid on the thrombosed side has no effect, but pressure in the retinal arteries is lowered by compression on the normal side. By this method the effect of a Selverstone clamp in gradually occluding the carotid can be followed accurately. Fisher (7) calls attention to a bruit best heard over the eye on the normal side when the internal carotid is thrombosed. The third as well as the second nerve may be affected on the side of the occlusion (8).

Pincock (9) followed up 117 men 8 years after they had had cerebral artery thromboses and had been treated only with early ambulation, physiotherapy and supportive measures. Twenty-four were functioning adequately, 5 required nursing care at home, 10 had been institutionalized, 12 had died

¹ 194 Common St., Belmont 78, Mass.

of new CVA's and 16 had died during the initial hospitalization. Ten percent of the survivors had recurrences.

Ushiro and Schaller(10) comparing a small group treated with and another without anticoagulants found no difference in mortality, course or complications. The anti-thrombotic effect of dicoumarol is distinct from its anticoagulant effect(11). In a patient receiving anticoagulants, sudden back pain without trauma may mean an extradural hematoma(12).

By direct observation of the pial vessels of monkeys, Rothenberg and Corday(13) demonstrate that transient strokes are not due to vasospasm, but rather to transient hypotension. Treatment should be directed to correct the hypotension.

One third of CVA patients, particularly those with spastic bulbar palsy, develop abnormality of respiration, particularly increase of amplitude and periodicity(14).

Walton(15) has written a thorough and well balanced book on subarachnoid hemorrhage.

Tonnis, *et al.*(16) analyzed the natural history of 289 patients with intracranial bleeding. Angiomas were twice as frequent in males, became manifest in the second and third decades. Only 17% had subarachnoid hemorrhage as the first symptom, and 36% had seizures without subarachnoid hemorrhage. Aneurysms usually ruptured in the fifth decade and subarachnoid hemorrhage was the first symptom in 75%. Bleeding tumors occurred in older patients, 50% became manifest with sudden hemiplegia and subarachnoid hemorrhage was infrequent.

Among Dalgaard's(17) autopsied cases with polycystic kidneys, only 7 had had subarachnoid hemorrhage. Among 234 hypertensive patients followed by Leishman(18) CVA's increased with diastolic pressure over 150 mm. or evidence of renal damage. Lechner(19) points out that headache and psychiatric signs become less prominent and neurologic signs become more prominent in subdural hematoma as intracranial pressure relationships become decompensated.

Among 1,875 patients with congenital heart disease reported on by Tyler and Clark(20, 21), one quarter had evidence of neurologic disease. Loss of consciousness or convul-

sions were 6 times as frequent in cases with cyanosis and the possibility of rapid variation in the amount of venous blood reaching the brain. The incidence of cerebral abscess was constant in all forms where venous blood could reach the brain without going through the lungs. Cerebrovascular accidents were most frequent in tricuspid atresia or transposition of the great vessels. Hypoxia of less than 50% appeared to be critical in children. In adults there was usually polycythemia of over 8 million red cells. Sudden onset of symptoms in the absence of these two features suggests embolism. In all 14 post mortem examinations of patients with strokes the infarct was in the middle cerebral artery's territory. Mental deficiency was greater in those with cyanotic types of heart lesion but was apparently unrelated to hypoxia *per se*.

Half of Barratt-Boyes'(22) 51 cases of aortic aneurysm were completely symptom free before rupture. There was often umbilical aching and sharper, severe back pain which was intermittent at first. Shock was the initial symptom in half the patients, and was a sign of poor prognosis. Ten patients died of heart failure or brain hemorrhage.

Fishberg(23) ascribes the proteinuria in subarachnoid hemorrhage, head trauma, etc., to ischemia of the kidney due to neurogenic vasoconstriction. Although the general blood pressure does not fall, the kidney's function passes through the same four stages as in hypotension and shock. Gordon and Goldner(24) discuss the need for careful management of water and electrolyte balance in the prolongedly unconscious patient.

Infection.—More potent strains of Polio virus are being produced for killed virus vaccine. Gamma globulin given three days before immunization with formalized vaccine does not suppress antibody response to the vaccine(25). Smade(26) reports that the results of the Chicago and Hawaiian epidemics prove that the preventive effect of vaccine given during the rising Polio incidence in an epidemic is greater than the hazard. In a comprehensive discussion of the development of attenuated live virus Polio vaccine which is now ready for step-wise series of tests in man—not mass trials—Sabin(27) reports that Salk vaccine

not interfere with subsequent alimentary infection by live attenuated virus.

Fiumara(28) describes the spread of an outbreak of early syphilis to indicate the need for alertness by the physician and intensive public health investigation. Orban (29) followed up 200 tabetic patients. Acute onset promised a benign course. Penicillin improved symptoms in half to three quarters of the patients. Symptomatic non-specific treatment was used for the others. Hahn (30) had similar results. Tabetic patients with optic atrophy whose vision is better than 40% and who are treated early do better than those with less vision. Csonka(31) found marked sudomotor deficiencies suggesting autonomic system involvement in neuro-syphilis.

Biologic false positive serologic tests led to the discovery of other diseases in 23% of patients by Miller(32). A rapid plasma reagin test for syphilis has been developed which is reliable and more economical than the VDRL slide test(33). The easier, more rapid and less expensive Treponema Pallidum Immune Adherence Test which uses a stable antigen appears to be as accurate and sensitive as the TPI test(34).

Isoniazid, a most potent anti TB agent, has a small molecule so that it diffuses readily into the CSF. When combined with streptomycin there is increasing evidence that intrathecal streptomycin is not necessary(35). Patients on isoniazid should receive pyridoxine to prevent neuropathy(36). Prognosis in TB meningitis is related to the duration of symptoms and the spinal fluid sugar and chloride, but not to the clinical condition on admission, which reflects vascular involvement(37).

Wright(38) summarizes present knowledge of toxoplasmosis. Confirmation of the diagnosis depends on serologic tests and inoculation of animals. The intradermal test is not apt to be positive except with chorioretinitis, because of the long interval required to develop fixed antibodies. The treatment of choice is sulfapyridine and pyromethamine (which may cause megaloblastic anemia). A clinical picture like toxoplasmosis but with negative toxoplasmosis tests may be due to cytomegalic inclusion disease(39). Typical inclusion cells may be obtained in

urine and gastric washings. Viral and immunologic tests will confirm the diagnosis.

Cerebral Cystocercosis is being recognized with increasing frequency(40-43). Diagnosis is assisted by discovery of fusiform calcifications along the muscle fibers of the legs and pelvis, eosinophilia of blood and CSF, and can be confirmed by a complement fixation test with the spinal fluid.

Tumor.—Of 76 cases of Lymphoma only one did not have neurologic involvement (44): compression of abdominal and pelvic nerves, diffuse meningeal involvement with compression and infarction of the cord or intra-cranial lymphomas.

Multiple Myeloma(45) involved the skull but not the brain. Blood vessels injury caused thrombosis and hemorrhage. Myeloma caused intra-cranial or intra-orbital tumor syndrome. Invasion of the meninges compressed cranial nerves, the cord or spinal roots. Degeneration of peripheral nerves was due to the accompanying amyloidosis.

Of 63 patients with acute Leukemia(46) 12 had intra-cranial hemorrhage (directly related to death in 10), one had meningitis, intra-cranial infiltration occurred in 8, and the peripheral nerves were infiltrated in 3 patients.

Among 49 patients with Lupus Erythematosus(47) 13 had severe depression, 5 had convulsions and 5, neuropathy. These symptoms in women between 20 and 40 should make one suspect Lupus Erythematosus.

Metabolic Diseases.—Van Boegaert(48) feels that until virus investigations make it possible there can be no differentiation, clinically or pathologically, within the group of Subacute Sclerosing Leukoencephalitis. The periodic activity of the EEG is characteristic(49). Hamoen, *et al.*(50) describe 23 cases. Austin(51) describes a method for isolation of diagnostic metachromatic material from the urine of patients with Metachromatic Leukoencephalopathy.

In a clinico-pathological study of 70 cases of Korsakoff syndrome Malamud and Skillicorn(52) found no specific cortical pathology but only degeneration of periventricular and periaqueductal grey, the mammillary bodies, dorsomedial nucleus of the thalamus and less frequently of the brain stem and

cerebellum identical with that in Wernicke's disease. This suggests that memory is not exclusively a cortical process.

The manifestations of Wilson's Disease are discussed by Bearn(53). Chalmers, *et al.* (54) describe the laboratory methods for diagnosis of the "abdominal" form without neurological signs, in children and young adults with cirrhosis. They think an abnormality of protein metabolism is the fundamental defect. Porter and Folch(55) find that the copper in the brain in Wilson's Disease, unlike that of normal brains, is bound in undialyzable form, presumably to protein.

Uzman and Jakus(56) analyzed two corneas with Kayser Fleischer rings. There were large amounts of colorless ionic copper throughout the substantia propria of the cornea. The ring was due to diffraction of light by fine granular deposits of lesser amounts of copper chelate in parallel zones within Descemet's membrane close to the endothelial surface.

Other CNS Diseases.—Most of the important papers on Multiple Sclerosis were presented at the 6th International Congress of Neurology and these are as yet available only in abstract form(63).

At post mortem examination of one of Bickerstaff's 8 cases of brain stem encephalitis, the only brain change was cerebral oedema(64). Most become gravely ill and then make a dramatic recovery. A total of 5 men have now been described(65) with external ophthalmoplegia, cerebellar ataxia, areflexia and polyneuropathy, all of whom recovered in 7 to 12 weeks. Cotton(66) describes an acute taxia developing in children over a few hours and usually recovering completely in two or three months.

Early ambulation(67) and psychotherapy(68) help to prevent the post concussion syndrome. The duration of disability is increased in proportion to the duration of post traumatic amnesia.

A large proportion of amnesia patients suffer from undetected gross organic nervous disease(69).

Confusion, stupor, tremor and athetoid movements in patients long continued on parenteral fluids, with prolonged diarrhoea

or in delirium tremens may be due to magnesium deficiency(70).

Skin divers may develop myelopathy of the thoracic levels of the cord due to decompression sickness. The spinal fluid protein is increased. For recovery the patient must promptly be properly decompressed(71).

Discography(72), the injection of radio-opaque material into the intervertebral disc, is indicated only if myelography is negative and the clinical picture strongly indicates a ruptured disc. It is then preferable to laminectomy.

Muscle Disease.—In Myasthenia, Alajouanine, *et al.*(73) demonstrated a thymic tumor in 10 patients by pneumomediastinography where ordinary x-rays and tomography had failed. In a 3-clinic cooperative study(74) prolonged action neostigmine and mestinon were found to be effective for 4 to 6 hours and were particularly helpful for night dosage. Severe lung pathology is the usual cause of death in fatal cases of Myasthenia(75). Iverson(76) reclassifies thymomas separating out seminomatous tumors which are highly malignant and radio-sensitive. The remaining thymomas spread locally but do not metastasize. With Myasthenia there is proliferation of large, pale epithelial cells often in cords or clusters. She raises the question of their having an endocrine function. In the absence of myasthenia lymphoid cells, spindle cells and stroma proliferate.

Pipberger(77) has reviewed Myotonia. Polyneuritis(78) has been added to the causes of Amyotonia Congenita as differentiated by Walton last year(79). Seventeen of his "limp child" group whose spontaneous activities seemed weak, who sat and walked late, whose reflexes were depressed, but whose muscle biopsies were normal, have continued to recover(80).

In Familial Periodic Paralysis an abnormal uptake of potassium by the muscle increased the intracellular/extracellular potassium ratio. Consequent hyperpolarization of the muscle membrane reduces muscle responsiveness(81). In Adynamia Episodica Hereditaria where recurrent paralysis is precipitated by slight increases of potassium,

the serum potassium is increased due to leakage from the intracellular compartment. Urinary potassium does not decline. Attacks can be controlled with calcium or glucose intravenously (82).

Nerve Diseases.—In Diabetic Neuropathy, Fagerberg (83) adduces the concomitance of retinopathy and nephropathy in support of a vascular etiology. Dreyfus, *et al.* (84) examined the third nerve from a case of diabetic ophthalmoplegia and found an ischemic neuropathy. However, in a case of severe sensory ataxia due to diabetes Bosanquet and Henson (85) found degeneration of the peripheral nerve, ganglia, root and posterior columns. They suggest that the primary lesion is in the ganglion cell and is a metabolic process like that in carcinomatous neuropathy.

In the Carpal Tunnel Syndrome the median nerve usually recovers with the use of a wrist splint (86). Section of the transverse ligament or even synovectomy may be necessary infrequently. Neuralgic Amyotrophy, sudden painful neuropathy of peripheral nerve or root distribution in the arm usually recovers fully within two years but may recur (87).

Meralgia Paresthetica is rarely a sinister disease. However, neoplasm or degenerative disease should be excluded particularly if the sensory defect exceeds the distribution of the lateral femoral cutaneous nerve, if there are other neurological signs or symptoms or if there is a history of intra-abdominal or pelvic disease (88). Surgery is not advised.

The longer the remissions in Trigeminal Neuralgia the more benign the course is apt to be. Among 155 cases half had remissions lasting six months and a quarter had remissions lasting a year or more (89).

The frequency, severity and complications of Herpes Zoster increase somewhat with age (90). Specific treatment has no effect, but symptomatic treatment and follow-up are desirable to detect serious complications (91, 92).

Methods of Examination.—Longo, Foster and Auth mounted an audiometer speaker on a perimeter to test sound localization (93). With temporal lobe lesions they

found impaired localization in the contralateral auditory field.

Shy and Haase (94) find that ability to recognize posture and position of the limbs is the most sensitive test of parietal lesions. The phenomena of extinction and hallucinatory sensation are insensitive indicators of minimal lesions.

Analgesia to temperature and other modalities of sensation occur in lesions from the skin to the thalamus but is rare with lesions of the parietal cortex (95).

Among 12 hundred patients without mental disorder, physical involvement of the nervous system or diseases which might have neurologic complications, vibration sense tested at the ankle did not begin to become impaired until the age of 70 (96).

Superficial abdominal reflexes were obtained in all of 200 infants two hours to one week old (97). Among 3,500 adults (98) it was absent more often with increasing age. Pregnancy, abdominal scars, obesity or abdominal distention did not result in great loss of the reflex.

BIBLIOGRAPHY

1. Austen, F. K., Carmichael, M. W., and Adams, R. D.: *N. E. J. Med.*, 257: 579, 1957.
2. Conn, H. O., Dunn, J. P., Newman, H. A., and Belkin, G. A.: *A. J. Med.*, 27: 524, 1957.
3. Torma, T., and Troupp, H.: *Acta Med. Scand.*, 158: 89, 1957.
4. Drori, J. B., Tartakoff, S., and LeMay, M. J.: *A.M.A. Arch. Neur. Psych.*, 78: 228, 1957.
5. Heyman, A., Harp, H. R., and Bloor, B. M.: *Neurol.*, 7: 97, 1957.
6. Rand, R. W.: *Bull. L. A. Neurol. Soc.*, 21: 175, 1957.
7. Fisher, M. C.: *Neurol.*, 7: 299, 1957.
8. Panter, K.: *Arch. Psychiat. Z. Neur.*, 195: 508, 1957.
9. Pincock J. G.: *Ann. Int. Med.*, 46: 925, 1957.
10. Ushiro, G. S., and Schaller, W. F.: *Neurol.*, 7: 253, 1957.
11. Wessler, S., Ballou, J. D., and Katz, J. H.: *N. E. J. Med.*, 256: 1223.
12. Alderman, D. B.: *N. E. J. Med.*, 255: 839, 1956.
13. Rothenberg, S. F., and Corday, E.: *J.A.M.A.*, 164: 2005, 1957.
14. Kouznetzova, A. S.: *J. Neuropath. Psychiat. (Moscow)*, 57: 950, 1957.
15. Walton J. N.: *Subarachnoid Haemorrhage*. E. S. Livingston Ltd. 1956.
16. Tonnies, W., Schiefer, W., and Walter, W.: *Deutsch. Z. Nervenheilk.*, 176: 666, 1957.

17. Dalgaard, O. Z.: *Acta Med. Scand. Suppl.* 328, 1957.
18. Leishman, A. W. D.: *Lancet*, 272: 437, 1957.
19. Lechner, H.: *Deutsch. Z. Nervenheilk.*, 176: 637, 1957.
20. Tyler, H. R., and Clark, D. B.: *A.M.A. Arch. Neur. Psychiat.*, 77: 17, 1957.
21. Tyler, H. R., and Clark, D. B.: *A.M.A. Arch. Neur. Psychiat.*, 77: 483.
22. Barratt-Boyes, B. G.: *Lancet*, 273: 716.
23. Fishberg, A. M.: *A.M.A. Arch. Int. Med.*, 99: 129, 1957.
24. Gordon, G. L., and Goldner, F.: *A. J. Med.*, 23: 543, 1957.
25. Brown, G. C., Rabson, A. S., and Craig, D. E.: *Pub. Health Rep.*, 77: 604, 1957.
26. Smadel, J. E.: *Bull. N. Y. Acad. Med.*, 33: 385, 1957.
27. Sabin, A. B.: *Bull. N. Y. Acad. Med.*, 33: 17, 1957.
28. Fiumara, N. J., Shinberg, J. D., Byrne, E. M., and Fountain, J.: *N. E. J. Med.*, 256: 982, 1957.
29. Orban, T.: *Acta Psychiat. Neurol. Scand.*, 32: 89, 1957.
30. Hahn, R. D.: *Brit. J. Vener. Dis.*, 33: 139, 1957.
31. Csonka, G. W.: *Brit. J. Vener. Dis.*, 33: 168, 1957.
32. Miller, J. L., Brodey, M., and Hill, J. H.: *J.A.M.A.*, 164: 1461, 1957.
33. Portnoy, J., Garson, W., and Smith, C. A.: *Pub. Health Rep.*, 72: 761, 1957.
34. Miller, J. N., Boak, R. A., and Carpenter, C. M.: *J.A.M.A.*, 163: 112, 1957.
35. Weiss, W., Eisenberg, G. M., and Flippin, H. F.: *J.A.M.A.*, 164: 947, 1957.
36. Anderson, T., *et al.*: *Lancet*, 2: 756, 1957.
37. Donald, G., McKendrick, W., and Gros, R. J. J.: *Neurol. Neurosurg. Psychiat.*, 20: 198, 1957.
38. Wright, Willard H.: *A. J. Clin. Path.*, 28: 1, 1957.
39. Guyton, T. B., Ehrlich, F., and Blanc, W. A.: *N. E. J. Med.*, 257: 803, 1957.
40. Yefimovitch, G., Perichitch, M., and Babitch, B.: *Fol. Psychiat. Neurol. Neurochir. Neerl.*, 60: 53, 1957.
41. Dent, J. H.: *J.A.M.A.*, 164: 401, 1957.
42. White, J. C., Sweet, W. H., and Richardson Jr., E. P.: *N. E. J. Med.*, 256: 479, 1957.
43. Lafon, R., Gros, C., Labaque, R., Vlaovitch, B. X., and Ribstein, M.: *Rev. Neurol.*, 96: 9, 1957.
44. Whisnant, J. P., Sickert, R. G., and Sayre, G. P.: *Med. Clin. N. A. Mayo Clinic*, pp 1151-1161, 1956.
45. Clarke, E.: *Deutsch. Med. Wschr.*, 81: 1472, 1956.
46. Wells, C. E., Silver, R. T.: *Ann. Int. Med.*, 46: 439.
47. Hill, L. C.: *Brit. Med. J.*, 2: 729, 1957.
48. van Bogaert, L.: *W. Z. Nervenhk.*, 13: 185, 1957.
49. Radermecker, J.: *W. Z. Nervenhk.*, 13: 204, 1957.
50. Hamoen, A. M., Herengreen, H., VanLeeuwen, W. S., and Magnus, O.: *Rev. Neurol.*, 94: 109, 1957.
51. Austin, J. H.: *Neurol.*, 7: 716, 1957.
52. Malamud, N., and Skillicorn, S. A.: *A.M.A. Arch. Neurol. Psychiat.*, 76: 585, 1957.
53. Bearn, A. G.: *A. J. Med.*, 27: 747, 1957.
54. Chalmers, T. C., Iber, F. L., and Uzman, L. L.: *N. E. J. Med.*, 256: 235, 1957.
55. Porter, H., and Folch, J.: *A.M.A. Arch. Neurol. Psychiat.*, 77: 8, 1957.
56. Uzman, L. L., and Jakus, M. A.: *Neurol.*, 7: 341, 1957.
57. Dawson, A. M., Rosenthal, W. S., de Groot, D., and Sherlock, S.: *Lancet*, 272: 392, 1957.
58. Summerskill, W. H. J., Wolfe, S. J., and Davidson, C. S.: *J. Clin. Invest.*, 36: 361, 1957.
59. Fisher, C. J., and Faloan, W. W.: *N. E. J. Med.*, 256: 1030, 1957.
60. Smith, C. McC., and Baroody, N. B.: *J.A.M.A.*, 165: 31, 1957.
61. Knox, W. E., and Hsia, D. Y. Y.: *A. J. Med.*, 27: 687, 1957.
62. Low, N. L., Bosna, J. F., and Armstrong, M. D.: *A.M.A. Arch. Neurol. Psychiat.*, 77: 359, 1957.
63. *Excerpta Medica*, Congress Issue, July, 1957.
64. Bickerstaff, E. R.: *Brit. Med. J.*, 1: 1384, 1957.
65. Smith, J. L., and Walsh, F. B.: *A.M.A. Arch. Ophthal.*, 58: 109, 1957.
66. Cotton, D. G.: *Arch. Dis. Childhood*, 32: 181, 1957.
67. Andreassen, J., Bach-Nielsen, P., Heckscher, H., and Lindeneg, O.: *Acta Med. Scand.*, 158: 239, 1957.
68. Muller, R., and Naumann, B.: *A.M.A. Arch. Neurol. Psychiat.*, 76: 597, 1957.
69. Kennedy A., and Blair, J. L.: *Brit. Med. J.*, 2: 428, 1957.
70. Hammarsten, J. H., and Smith, W. O.: *N. E. J. Med.*, 256: 897, 1957.
71. Johnson, J. E.: *N. E. J. Med.*, 256: 1138, 1957.
72. Wise, R. E., Gardner, W. J., and Hosier, R. B.: *N. E. J. Med.*, 257: 6, 1957.
73. Alajouanine, T., Baretty, M., Castaigne, P., and Coury, C.: *Rev. Neurol.*, 96: 1, 1957.
74. Schwab, R. S., Osserman, K. E., and Tether, J. E.: *J.A.M.A.*, 165: 671, 1957.
75. Rowland, P., Hoefler, P. F. A., Aranow Jr., H., and Merritt, H. A.: *Neurol.*, 6: 307, 1956.
76. Iverson, L.: *A. J. Path.*, 32: 695, 1956.
77. Pipberger, H.: *Schweiz. Arch. Neurol. Psychiat.*, 78: 207, 1956.
78. Chambers, R., and MacDermot, V.: *Lancet*, 272: 397, 1957.
79. Walton, J. N.: *Lancet*, 270: 1023, 1956.
80. Walton, J. N.: *J. Neurol. Neurosurg. Psychiat.*, 20: 144, 1957.
81. Grob, D., Johns, R. J., and Liljestrang, A.: *A. J. Med.*, 23: 356, 1957.
82. Gamstorp, I., Hauge, M., Helweg-Larsen,

- H. F., Mjones, H., and Sagild, U.: *A. J. Med.*, **23**: 385, 1957.
83. Fagerberg, S. E.: *Acta Med. Scand.*, **157**: 401, 1957.
84. Dreyfus, P. M., Hakim, S., and Adams, R. D.: *A.M.A. Arch. Neurol. Psychiat.*, **77**: 337, 1957.
85. Bosanquet, F. D., and Henson, R. A.: *Fol. Psychiat. Neurol. Neuroch. Neerl.*, **60**: 107.
86. Phalen, G. S., and Kendrick, J. I.: *J.A.M.A.*, **164**: 524, 1957.
87. Turner, J. W. A., and Parsonage, M. J.: *Lancet*, **273**: 209, 1957.
88. Stevens, H.: *A.M.A. Arch. Neurol. Psychiat.*, **77**: 557, 1957.
89. Rushton, J. G., and MacDonald, H. N. A.: *J.A.M.A.*, **165**: 437, 1957.
90. Burgoon, C. E., and Burgoon, J. S.: *J.A.M.A.*, **164**: 265, 1957.
91. de Moragas, J. M., and Kierland, R. R.: *A.M.A. Arch. Dermat.*, **75**: 193, 1957.
92. Epstein, E., and Allington, H. V.: *A.M.A. Arch. Dermat.*, **76**: 408, 1957.
93. Longo, L. P. S., Forster, F. M., and Auth, T. L.: *Neurol.*, **7**: 655, 1957.
94. Shy, G. M., and Haase, G. R.: *Dtsch. Z. Nervenheilk.*, **176**: 519, 1957.
95. Barbizet, J., Huong, B. Q., and Boudin, G.: *Rev. Neurol.*, **96**: 19, 1957.
96. Himel, H. A., and MacDonald, R. I.: *Can. M.A.J.*, **77**: 459, 1957.
97. Harlem, O. K., and Lonnum, A.: *Arch. Dis. Childhd.*, **32**: 127, 1957.
98. Madonick, M. J.: *Neurol.*, **7**: 459, 1957.

ALCOHOLISM AND GERIATRICS

KARL M. BOWMAN, M.D.¹

ALCOHOLISM

Use of alcohol increasingly affects the problem of highway accidents and fatalities in this country. According to the National Safety Council, use of alcohol by a driver or drivers accounts for 1 in every 4 highway fatalities. The yearly rate of 38,000 car accident deaths has stirred several major organizations to study the problem as an epidemic. They note in their summary of findings that the dangerous effects of an evening's drinking may last up to 18 hours, regardless of coffee intake; and that use of sedatives and tranquilizing drugs dulls the driver's skill. The habit-forming properties of meprobamate have also been noted. In a series of more than 600 alcoholic patients treated by the drug, its use led to excessive self-medication in 13 patients, 10 of them abstemious at the time. With overdoses the patient acts as if he were drinking, and the danger of driving a car is obvious. Various reports in the literature disagree on the interpretation of the term "under the influence of alcohol." For example, Loftus, from his experience with tests results of about 400,000 car drivers in Oslo, considers the clinical diagnosis of "not sober" not readily quantified because it is based on multiple symptoms and observations.

A monograph edited by Wallerstein(1)

reports a comparison of 4 treatment methods in alcoholism. Use of disulfiram, conditioned reflex, group hypnotherapy and milieu treatment was carried out for 2½ years on 178 patients in a VA hospital. The group treated with disulfiram rated best in the evaluation of improvement.

Various other reports involve the use of disulfiram and the newer substitutes; follow-up studies of alcoholics committed to a state hospital for treatment and of those treated in an alcohol clinic; and the value of electroencephalography as a diagnostic aid to choice of treatment.

One investigator claims from comparative studies that alcohol consumption is linked with physique, being greatest in fat persons and least in tall thin ones. Another writer, from his comprehensive review of recent research studies, sees no warrant for such conclusions.

In Hagnell and Wretmark's study(2) of 130 male alcoholic patients treated in a university psychiatric clinic in Sweden, 24 (18.5%) had or had had peptic ulcer, as compared with 8.1% in the general population. The onset of the ulcer preceded that of alcoholism in most of the 24 men. Though alcoholism does not cause peptic ulcer, both are regarded as different manifestations of a common basic disturbance; and alcoholics who have peptic ulcer or whose near relatives

¹ 3831 Market St., San Francisco, Cal.

have it are seen as an important group who differ in many ways from other alcoholics.

Although allergy to alcohol is considered quite rare, a case is reported of a patient with an allergic type of angioneurotic edema.

Bacon(3) views as 2 important perspectives, in studying behavior of alcoholic patients and the response to them, the subject's sociocultural orientation and the time, place and group in drinking. For example, the social rules for use of alcohol among orthodox Jews almost preclude alcoholism. Rules for drinking vary so greatly in white middle class Protestants of Anglo-Saxon descent that about 3-7 of every 100 drinkers are alcoholics. Social rules among Mormons ban use of alcohol, which is used by only 25% of men and 6% of women; the rate of alcoholism is very low, yet 3-7 of every 100 drinkers become alcoholics. The function of drinking in a South American primitive society is so well understood that alcoholism seems to be unknown.

A few papers discuss the use of alcohol in foreign countries. In Ireland, where drinkers number about 1½ million, Alcoholics Anonymous has gained a good start. But until public attitudes toward heavy drinking change and free treatment is offered outside the mental hospitals, the problem cannot be adequately tackled.

Greatly increased consumption of alcohol in Peru in the past 15 years has made alcoholism a serious public health problem, according to Caravedo and Vargas(4). Peru ranks 7th in total alcohol consumption and 1st per capita of spiritous liquors, among countries with available data. The drinking (whose costs equal 30% of the general budget) aggravates malnutrition, especially in the lower classes, and causes many toxic reactions because 70% of alcohol is not rectified. Alcoholism accounts for 60% of arrests and 35% of traffic accidents; it ranks 3rd in causes of admissions to the Lima mental hospital. These writers recommend higher liquor taxes and a bureau in the mental hygiene department as a basis for control of the problem.

Eskimos usually do not take to alcohol. Eskimo workers in Hudson Bay, unlike the Red Indians, find alcohol no problem. At first some of them drank beer, apparently to

gain status with white workers, but once they had proved their skills they dropped beer and turned their attention to other activities, notably electrical gadgets.

BIBLIOGRAPHY

1. Wallerstein, Robert S., Ed.: *Hospital Treatment of Alcoholism*. New York: Basic Books, 1957.
2. Hagnell, O., and Wretmark, G.: *J. Psychosom. Res.*, 2: 35, 1957.
3. Bacon, Selden D.: *J.A.M.A.*, 164: 177, 1957.
4. Caravedo, B., and Vargas, A.: *Alcoholism: A Public Health Problem*. *Rev. J.A.M.A.*, 163: 1642, 1957.

GERIATRICS

The life expectancy of United States males of all races rose from 46.3 in 1900 to 66.7 years, in 1955, and, correspondingly, that of females from 48.3 to 73.6 years, according to Institute of Life Insurance Reports. Bond (1) adds that, for all ages, the age-adjusted death rates in white males, though only 10% higher than for females in 1900, were 56% higher in 1953; and that the excess in male mortality is highest for age groups 15-25 and 45-64.

The "fragile male" is variously explained. Some note that females outlive males in many species of lower animals and in many human populations; a difference provided for by the ratio of 106 male to 100 female human births. Madigan's recent study of about 41,000 celibates (9,000 m. 32,000 f.) for the period 1900-54 shows greater female than male longevity and also a spectacular advance in female longevity for the later years of the study. This overall gain is ascribed to greater female resistance to degenerative diseases. Others object that a change in the fundamental biology of the sexes would have to be posited, to explain the steadily changing ratio of U. S. male to female deaths in the past 50 years. Further, 19 Western nations have varying ratios of female to male longevity (1.2 to 1.5), with the United States the highest and the Scandinavian countries the lowest ratio.

It is also said that women stand the stresses of modern industrial life better than do men; e.g., rates for cardiovascular-renal disease and ulcers in the past 20 years have risen over 30% for men, but have declined

30% for women. Women are said to seek medical care earlier than do men. Men's heavier musculature may even be a liability in psychologic stresses.

In observations on vertebrates, some evidence shows that mammals with poor temperature regulation, a normally low metabolic rate and low fecundity have a much longer life span than do other mammals of similar size; but there are also contradictory observations.

The trend for increased average longevity is now approaching a limit; further increases can be expected only from a general breakthrough in treatment of diseases of later life, according to Woodhall and Jablon(2).

Psychologic aspects of aging continue to be assessed. An experimental animal study on aging rats(3) showed in each test group that some animals learned and recalled mazes within the normal limits of younger rats, while others of the same age could not learn a new maze nor recall or relearn an old one; no biologic signs of age distinguished the 2 groups. As a group, older rats learned more slowly; individually, each rat performed with great constancy.

A series of controlled tests showed that appeals to motivation did not increase performance in aged persons, whose severe deficits included the areas of space and reasoning abilities. Another investigator ascribed poorer performance in elderly subjects to confusion and unwillingness to make corrections rather than to lack of motivation. Any increase in item-complexity and in load on short-term memory especially caused poorer results than in younger subjects.

Peck(4) considers that sexual activity belongs to the first, not the second half of life, when people should not still try to work out unfulfilled sexual needs but use and derive satisfactions from accumulated skills and wisdom.

A number of papers again report satisfactory use of various ataractic drugs in treatment of serious mental disturbances in the

elderly. Appropriate use of estrogen-androgen therapy is again recommended. Other papers deal with the recurring need to differentiate between organic and nonorganic deficits in elderly psychotic patients. In all cases home treatment is recommended when possible, to avoid the dangers of long hospitalization.

Among physical factors important for efficient old age and for mental health, Sheldon(4) terms the tendency to fall "a true old age phenomenon." This liability, which begins in the early 60's and slowly increases, he attributes to decline in postural skill, many aspects of which suggest that the brain nuclei lose function comparatively early. The common trouble in later old age, with vertigo and getting about in the dark point to inability to coordinate information from the labyrinth with that of the eye. This decline of postural skill, belonging to the same process as slowness of reaction speed, needs thorough study.

White(5) explains how a suitable degree and amount of daily exercise help the aging person to maintain health and well-being.

Many articles again review the problems of social adjustment for aging persons and of criteria for retirement. An AMA committee has begun the pioneer work of drafting both physical and psychological examinations to determine bases for partial or complete retirement.

A new journal of international character, *Gerontologia*, was begun in 1957, to serve "especially the experimental side of gerontology."

BIBLIOGRAPHY

1. Bond, J. P.: *Geriatrics*, 12: 489, 1957.
2. Woodhall, B., and Jablon, S.: *Geriatrics*, 12: 586, 1957.
3. Verzar-McDougall, E. J.: *Gerontologia*, 1: 65, 1957.
4. In Anderson, J. E., Ed.: *Psychological Aspects of Aging*. Washington, D. C.: American Psychological Association, 1956.
5. White, Paul D.: *J.A.M.A.*, 165: 70, 1957.

EPILEPSY

ELIZABETH G. FRENCH, M.D.¹

The encouraging trend toward etiologic classification of the epilepsies and away from the waste-basket designation of all seizures as "epilepsy" continues. From Tel Aviv(1) comes word that of 407 patients with epilepsy, definite birth or accident trauma were responsible for 30% of the cases. This cause was closely followed by infection. In another 8% an organic origin though not defined was suspected. Multiple causative factors were usually present in individuals. Only 9% of the cases had a history of heredity. Such history in progenitors is often concealed, so that additional clues to inheritance of lowered seizure threshold are being sought. Photic stimulation may be one such clue. Persons with epilepsy initially unrelated to light may later, however, have attacks caused by photic stimulation(2). Family surveys in all these cases are being undertaken.

Convulsive or autonomic seizures may be a first manifestation of certain inborn errors of metabolism. Studies of patients with phenylpyruvic aciduria(3, 4, 5) suggest that not all of such cases have extreme mental retardation as originally thought, and that dietary measures restricting phenylalanine intake may prevent characteristic and profound mental changes. Acute porphyria(6, 7) may often remain unrecognized and may simulate so-called "abdominal epilepsy." Galactosemia(8), another genetic metabolic error with possible seizures may be controlled by dietary measures. More comprehensive laboratory investigations, e.g. simple blood and urine determinations would help catalog some patients labelled idiopathic.

We are reminded that about one-third of patients sustaining open brain injury develop seizures. Walker(9) in a series of 244 post-traumatic epileptics followed for 10 years after head injury, shows higher mortality and morbidity rates than in normal population, and a work status correlating with intelligence. More than a third were seizure free from the fifth to the tenth year after injury. In evaluating the disability of an individual, the disturbance involves person-

ality, and is more than the sum of hemiplegia and epilepsy. The surgical approach (10) to resistant focal seizures is gaining favor in many areas, and success is frequent in patients with a known causative factor and unilateral involvement(11, 12). The Second International Colloquium on Temporal Lobe Epilepsy, held at the National Institute of Health in March, 1957 (13), and International Congress of Electroencephalography and Clinical Neurophysiology at Brussels, July, 1957(14), discussed in detail the EEG, neurophysiology, pathology, neurochemistry and surgical aspects of seizures. We are entering a new era of refinement in neurosurgical techniques with the aid of depth electroencephalography and depth electrode stimulation studies(15). Ultrasound(16), while still in the experimental stage, can be focused to produce a destructive lesion deep within the brain without damaging intervening tissue. It has certain limitations. It does not penetrate a vacuum, nor pass through an interface of two mediums with widely different acoustic characteristics. It produces physical interference with deflection, reflection, absorption. The exact dosage is undetermined. Hence its practicality is problematic.

Only a few of the many seizure patterns discussed in the literature can be mentioned here. Massive muscle spasms(17) or infantile spasms are characterized by lightning-like contractions of most of the body musculature, in series and usually starting between 1-6 months of age. They gradually disappear but are often replaced by other seizure patterns. They are usually associated with hypsarrhythmia on the EEG and severe mental and motor retardation. The prognosis is not good but may be more favorable if seizure activity disappears after a brief period or if seizures are single instead of multiple. Gemonil and Mebaral are often effective. Attacks of laughter(18) may occur as epileptic patterns with hypothalamic focus. A case of carotid sinus epilepsy(19) is reported from London with no associated change in pulse rate or blood pressure, and with freedom from blackouts following uni-

¹ The Children's Medical Center, 300 Longwood Ave., Boston 15, Mass.

lateral carotid sinus denervation. For some female patients convulsions are more frequent around the menstrual time(20), and least common during the luteal stage—4 to 13 days before menstruation begins. It is suggested that progesterone secreted during the luteal phase may afford some protection against seizures. Animal experiments support this theory.

Narcolepsy, long acknowledged as an unhappy relative of epilepsy, is often associated with other symptoms of cataplexy, sleep paralysis, or nightmares(21). It must be diagnosed from the clinical history as laboratory studies are unrevealing. So far there is no satisfactory treatment although analeptics may be helpful.

Drug therapy is still the first and best line of defense against seizures. Significant benefit to psychomotor seizures is reported in 28% of 411 patients treated with Phenacemide(22). Physicians are warned of possible side effects of hepatitis, personality change, rash, proteinuria, G.I. upsets. Long-term experience with Phensuximide(23) has confirmed the initial good reports particularly for petit mal but also for grand mal and focal seizures. Peganone(24), a new hydantoin, does not possess as great anti-convulsant properties as diphenylhydantoin but deserves a place in the armamentarium because of its effectiveness in many major motor and some psychomotor seizures and its freedom from gingival hypertrophy and hirsutism.

Diamox(25, 26) continues to show remarkable benefit in "centrencephalic" epilepsy and is helpful in other types of seizures.

Celontin(27), the new succinimide relative of Milontin, has shown marked benefit in 40% of 76 patients with all seizure types, in 55% of patients with petit mal, and in 33% of patients with psychomotor seizures.

Words of caution appear in articles describing megaloblastic anemia during Mysoline therapy(28) and with hydantoins(29). Fortunately responses to folic acid were satisfactory. Many other agents commonly used in seizure control may cause dyscrasias(30). More adequate reporting of untoward reactions is needed if unfortunate results with the use of these potentially toxic therapeutic agents are to be avoided.

BIBLIOGRAPHY

1. Alfandary, I.: Harefuah, 52: 283, June, 1957.
2. Bertha, H., and Lechner, H.: Wien. klin. Wchnschr., 68: 954, 1956.
3. Pépin, B.: Presse méd., 64: 2091, Dec., 1956.
4. Hsia, D. Y.-Y., Knox, W. E., and Paine, R. S.: A.M.A.J. Dis. Child., 94: 33, July, 1957.
5. Horner, F. A., Streamer, C. W., Clader, D. E., et al., A.M.A.J. Dis. Child., 93: 615, June, 1957.
6. Hierons, R.: Brain, 80: 176, June, 1957.
7. Craig, J. B.: W. Virginia Med. J., 53: 175, 1957.
8. Komrower, G. M., Schwarz, V., Holzel, A., and Goldberg, L.: Arch. Dis. Childhood, 31: 254, Aug., 1956.
9. Walker, A. E.: J.A.M.A., 164: 1636, Aug. 1957.
10. Green, J. R., and Steelman, H. F. Eds.: Epileptic Seizures: A Correlative Study of Historical, Diagnostic, Therapeutic, Educational and Employment Aspects of Epilepsy. Baltimore: Williams & Wilkins Company, 1956.
11. Drake, R. L., Hibbard, J. S., and Vin Zant, L.: J. Kansas M. Soc., 58: 1, Jan., 1957.
12. Paillas, J. E., and Pruvot, P.: Presse méd., 65: 197, Feb., 1957.
13. Second International Colloquium on Temporal Lobe Epilepsy, National Institute of Nervous Diseases and Blindness, Bethesda, Md., March, 1957. In press. Springfield: C. C. Thomas.
14. Fourth International Congress of Electroencephalography and Clinical Neurophysiology. Acta Medica Belgica, Brussels, July, 1957.
15. Powell, E. W., Haggart, J., and Goodfellow, E.: Neurol., 7: 689, 1957.
16. Friedland, F.: J.A.M.A., 163: 799, March, 1957.
17. Chao, D., Taylor, F. M., and Druckman, R.: J. Pediat., 50: 670, 1957.
18. Druckman, R., and Chao, D.: Neurology, 7: 26, 1957.
19. Behrman, S., and Knight, G.: Brit. M. J., 2: 1522, Dec., 1956.
20. Laidlaw, J.: Lancet, 271: 1235, 1956.
21. Daly, D. D., and Yoss, R. E.: Electroencephalog. & Clin. Neurophysiol., 9: 109, Feb., 1957.
22. Livingston, S., and Pauli, L. L.: N.E.J.M., 256: 588, 1957.
23. Rey-Bellet, J., and Lennox, W. G.: A.M.A. Arch. Neurol. & Psychiat., 77: 23, Jan., 1957.
24. Livingston, S.: J. Pediat., 49: 728, Dec., 1956.
25. Golla, F. L., and Session Hodge, L. A.: J. of Mental Sc., 103: 430, 1957.
26. Wada, T., Sato, T., and Morita, S.: Dis. of the Nerv. System, 18: 1, March, 1957.
27. French, E. G., Rey-Bellet, J., and Lennox, W. G.: "Celontin (N-methyl, methylphenyl-succinimide) in Psychomotor and Petit Mal Seizures." To be published.
28. Christenson, W. N., Ulmann, J. E., and Roseman, D. M.: J.A.M.A., 164: 940, 1957.
29. Gydell, K.: Acta Haemat., 17: 1, Jan., 1957.
30. Wintrobe, M. M., and Cartwright, G. E.: A.M.A. Arch. Int. Med., 98: 559, Nov., 1956.

MENTAL HEALTH IN EDUCATION

W. CARSON RYAN, Ph.D.¹

"How much real advance has there been in education for mental health?" asks the editor of *Understanding the Child*, quarterly journal of the National Association for Mental Health, in the October (final) issue of this publication, which began in 1931. "Are teachers and other school workers more aware than they appeared to be at one time of the importance of good mental and emotional attitudes and practices in the school room and in the education situation generally?" He answers:

It is difficult to measure such things accurately, of course, but studies since Wickman's classic research of thirty years ago are, on the whole, decidedly encouraging. Teachers, other school staff, and people generally are far more aware of the needs and possibilities of good mental health—as witness the thousands of communities where schools have become pleasant places; where the old, bare, lined-up, screwed-down-desk type of school room has been replaced by bright, sunny rooms, with movable seating and attractive surroundings; and where the stiff old brick buildings have been replaced by attractive new schools, often set in the midst of many acres of beauty and play space. Even the teacher can be attractively dressed nowadays; and she (or he) can actually be friendly and human(1).

Study of the role of the schools in promoting mental health continued to be an important part of the program of the Congressional Joint Commission on Mental Health and Illness during 1957. An exhaustive examination of relevant literature was undertaken under the direction of Wesley Allinsmith and George W. Goethals, of the Harvard University Graduate School of Education, and an intensive field study of three Massachusetts communities was initiated. The review of the literature has as its goal: 1. to report what is known and what is believed about the roles the educational institutions, from the nursery school through the university, are now playing in fostering or damaging mental health; and 2. to assess the part schools might be encouraged to take in the future in promoting mental health. The study seeks to appraise what claims are trustworthy, what new procedures are being tried, and "what is the current cli-

mate of informed public opinion in the field."

A special faculty seminar devoted to mental health education at the University of Texas is described in the recently revised program of the Hogg Foundation for Mental Hygiene(2). "Research workers in psychology, education, and sociology met regularly to share theories and techniques, particularly as they applied to the general problem of promoting better mental health through the public school system," says the statement. Projects fostered by the Foundation include a 3-year study of the mental health emphasis applied to the rural schools of one county and a description of an experimental approach to the effectiveness of mental health materials in high school.

That the schools can deal successfully with very difficult behavior cases is noted by Redl and Wineman in their current volume on the aggressive child(3). Children from Pioneer House attended a special opportunity class in the Detroit Public School system—a type of class reserved for children who show excessive behavior disturbances in the regular classroom, and staffed by teachers specially trained to handle problem behavior. And in the report of a recent workshop conference in Washington, D. C., on mental health and education, Rev. William F. Jenks, of the Catholic University of America, pointed out that since many of the emotional difficulties of present-day adults have their origin in early deprivations, tensions, and conflicts that lead to the development of undesirable personality patterns, "the mental health of children today is receiving greater attention from educators." He urges that personnel with adequate professional training in this area be employed and courses in mental hygiene be provided in all elementary and secondary schools(4).

Describing current international efforts in behalf of education for mental health Prof. William Boyd, of the University of Glasgow, says:

The immediate mental health program must be concerned with the maladjusted people of the present generation, but beyond that is the thought of the men and women of the future growing up under

¹ Univ. of North Carolina, Chapel Hill, N.C.

to ex a life free from the prejudices and pressures that make for personal unhappiness and social conflicts (5).

Camilla Anderson, dealing with psychodynamics as "a creative approach to mental health," cites the total school experience and the impact of whatever group of persons youth tries to identify himself with—Sunday school, the church, neighborhood clubs, or gangs (6). The importance of play in early education as a means of maintaining mental health, especially in early childhood through the nursery school, is emphasized in a recent report by the head of the Department of Child Development in the University of London Institute of Education. "We are coming more and more to realize," says the report, "that emotional satisfactions lie at the root of all intellectual interests, and that feelings are the driving force behind all intellectual efforts" (7). And a recent study of a therapeutic play group in a New York City industrial area led to the conclusion that "many of the children function better in the classroom as a result of their participation in the specialized play group" (8).

Recognition of the importance of mental health, the need for giving "all possible support to movements which encourage improved facilities for mental patients," and more widespread public education regarding the problems of mental health are listed by French and his associates in their recent statement as desirable "behavioral outcomes of general education" (9). The high school student would, if he lives up to certain *illustrative behaviors*, they maintain, "inform himself concerning our national problems of mental illness and of the factors in our lives

which often result in mental breakdown," and deal with the mentally ill with the same understanding and sympathy he shows toward the physically ill.

Though there have been many improvements in mental health in education in recent years, Kanner says in the latest edition of his book, *Child Psychiatry*, "there are still child-caring institutions in which sadism, disguised as discipline, indulges in orgies at public expense and with public acquiescence. There are foundling homes in which infants, well fed and looked after in a material sense, are ruined emotionally by lack of affection and stimulation. There are schools, both public and private, in which children's spirits are crushed by coldly punitive rigidity" (10).

BIBLIOGRAPHY

1. Understanding the Child, October 1957, p. 98.
2. Program of the Hogg Foundation for Mental Hygiene. (rev. ed). Austin, Texas: 1957.
3. Redl, Fritz, and Wineman, David: *The Aggressive Child*. Glencoe, Ill.: The Free Press, 1957.
4. *Mental Health and Special Education*. Washington, D. C.: Catholic University of America Press, 1957.
5. *Education and Philosophy: The Yearbook of Education*. Yonkers-on-Hudson, N. Y.: World Book Co., 1957.
6. Anderson, Camilla: *Beyond Freud: A Creative Approach to Mental Health*. New York: Harper and Brothers, 1957.
7. Gardner, D. E. M.: *The Education of Young Children*. New York: Philosophical Library, 1957.
8. Schiffer, Mortimer: *Mental Hygiene*, 41: 185. April 1957.
9. French, Will, and associates: *Behavioral Goals of General Education in the High School*. New York: Russell Sage Foundation, 1957.
10. Kanner, Leo: *Child Psychiatry* (3d ed.). Springfield, Ill.: Charles C Thomas, 1957.

INDUSTRIAL PSYCHIATRY¹

RALPH T. COLLINS, M.D.²

INTRODUCTION

"A Medical Department contributes to the operations of the company it serves if it improves the health, both mental and physical,

of employees and management; if it decreases absenteeism from work; if it helps reduce the number of accidents; if it evaluates and promotes healthful work places; and if it thereby makes happier and more efficient employees" (1).

This quotation typifies the philosophy of present, progressive medical departments in

¹ Appreciation is due the other members of the Committee on Industrial Psychiatry, A.P.A., and American and Foreign correspondents.

² 343 State St., Rochester, N.Y.

industry today. The whole man—his work problems, his interrelationships with people, his working environment, his off-the-job habits and problems—is being considered in today's industrial medical programs. Each year brings more interest in the emotional problems of the employees by industrial medical departments. The impact of such problems, on-the-job and off-the-job, is slowly being recognized.

D'Alonzo and Fleming(2) recently state the following: "The aim of occupational psychiatry certainly differs in no respect from that of any other branch of psychiatry—the aim of all is the treatment and cure of the signs or symptoms resulting from emotional or mental conflict. Moreover, the psychiatrist in industry conducts research into the factors necessary to prevent severe emotional disturbances; he trains plant physicians in techniques for handling psychiatric problems, and consults with plant physicians on individual cases, or group behaviors, which are, or are suspected of being, of occupational origin; and he advises management regarding the proper methods of handling emotionally disturbed individuals or groups. To be successful, occupational psychiatry should function as a unit of an occupational medical department. Its function, just as with any other unit, must be to contribute to the occupational health program in general."

From the same article, this thought is mentioned, "Cooperation should exist between the occupational psychiatrist and the personal psychiatrist in both diagnosis and treatment to the end that the needs of the patient will be more fully and intelligently served. . . . it is our firm belief that both the need and the scope of the work of the private practitioner of psychiatry will be increased and more adequately expanded through the efforts of the industrial psychiatrist. Not only will there be ample room for both fields, but also the needs of the patient will be more fully realized, and appropriate therapy more successfully instituted."

ACTIVITIES—DOMESTIC

During the year 1957 interest in the role of psychiatry in industry was demonstrated by a wide range of activities among medical, industrial and community groups. These were largely educational in orientation, but

subject matter ranged from the present and potential contributions of the psychiatrist in industry to group meetings with a frankly therapeutic intent.

Medical groups demonstrating an interest in the field centered first among groups interested in occupational medicine. Illustrative were the prominent places accorded psychiatric topics at the annual meetings of the Industrial Medical Association and the American Academy of Occupational Medicine. Week-long seminars for industrial physicians were sponsored by the Menninger Foundation and the University of Cincinnati Institute of Industrial Health. Human relations Seminars for nurses drew considerable interest for the second year in a row at the University of California at Los Angeles. These were conducted from the viewpoint of dynamic psychiatry with a goal of assisting nurses in the administrative and supervisory aspects of their work. This venture is but one of many para-medical utilizations of psychiatric insights by industrial relations groups.

Industrial Management continues to demonstrate increasing interest in the application of psychiatric concepts to the work situation, to policies, to personnel, to inter-personal relationships and to management procedures. The Executive Seminars at the Menninger Foundation were held again this year with applications exceeding the number of available places. Many conferences, sponsored by industrial groups emphasized mental health themes. From a two-day conference for executives in Keokuk, Iowa, to continuing bi-weekly seminars in Memphis, Tennessee, there has been a burgeoning interest at the local level.

Community interest has been equally widespread. A few examples would include the focussing of attention upon the emotional aspects of work at workshops and meetings sponsored by such groups as the Kentucky Welfare Association, the Chicago Heart Association and the National Health Forum. Chambers of Commerce, service clubs and other community agency groups throughout the country appear to be calling increasingly upon psychiatrists to discuss various aspects of mental health as it relates to the occupational environment.

ACTIVITIES—ABROAD

In England, Elliot Jacques continued the study of the Glacier Metal Company, reported in "The Changing Culture of a Factory." Rather than as a leader of a research team, he has more recently been working as a private consultant to the company. His book, *Measurement of Responsibility*(3), reports an interesting approach to handling social stresses in the work setting by redefining the responsibility involved in each job in terms of the necessary discretion required for its satisfactory performance.

In a letter from Dr. A. T. M. Wilson(4) of The Tavistock Institute of Human Relations, London, England, we learn that Dr. G. M. Carstairs, Director of the Medical Research Council at Maudsley Hospital, continues with his studies of sheltered workshop activities. He states that in his article, "The Background of Management," he attempts to contrast in outline the relationship of research and background studies to professional training, on the one hand, in medicine and engineering and, on the other, in relation to general management.

From Yugoslavia, Dr. Bozidar Markovic (5), Chief, Division of Health Education, Central Institute of Hygiene, states that attempts to integrate psychiatry into industry are still being made. Industrial psychologists from many enterprises met for the first time recently. He declares that the psychologists have tackled the following problems: 1. analysis of working places and workmen; 2. investigation in the causes of the large number of accidents at work and elaboration of a method for their prevention; 3. human relations. Investigations into the causes of absenteeism and the relationship to emotional problems are continuing.

From Dr. Temple Burling(6), who spent last year surveying industrial psychiatry in Europe, we find that an outstanding center for industrial psychiatry in Holland is the National Institute for Preventive Medicine in Leiden. The division on social and mental health is under Prof. J. Koekebaaker. The research program runs all the way from basic physiological studies to studies of social organization in industrial communities.

At Phillips Electric Company in Eindhoven, Holland, studies of the incidence of

ulcer in different occupation levels are in progress.

In Paris, Dr. Burling reports that a very fine rehabilitation program for mental hospital patients is under way under Dr. Paul Siadon, Neuilly-sur-Marne (S. and O.) Prefecture de la Seine. The patients are sheltered in halfway houses during their transition to work and are aided by a group formed for this purpose. In Paris, also, is a management organization which has a division of human relations which carries on many training programs for supervisors and executives.

Dr. Mertens, professor of psychiatry at the University of Louvain, Belgium, is engaged particularly in industrial psychiatry. He conducts many conferences for industrial leaders on the Bethel Group Dynamics pattern.

In Vienna, Austria, there is one industrial psychiatrist working in a spinning and weaving factory.

In Sweden, Dr. Burling stated that Dr. Erland Mindus is doing much in the mental hygiene field. He still has a course of weekly meetings going on industrial mental health for the executive group.

The Institute of Industrial Health, Helsinki, Finland, has an industrial psychiatrist.

APPOINTMENTS

Dr. Alan McLean has joined the medical staff of I.B.M. as a full-time psychiatrist. Dr. Clarence J. Rowe has become a member of the Medical Department of the Minnesota Mining and Manufacturing Company, St. Paul, Minn., as a psychiatrist. Dr. Edgar Bostian recently began his work as a psychiatrist for the American Cyanamid Company.

BOOKS

Mention should be made of a book entitled *Practical Psychiatry for Industrial Physicians* by Dr. W. Donald Ross. This book has been well received. Dr. Ross has had much experience in training industrial physicians and in conducting industrial psychiatric seminars throughout the Cincinnati area(7).

BIBLIOGRAPHY

1. Baird, V. C.: *Industrial Medicine and Surgery*, Humble Oil and Refining Company, 26: 297, 1957.

2. D'Alonzo, C. A., and Fleming, Allan J.: *Industrial Med. and Surg.*, 25:466, 1956.
3. Jacques, E.: *Measurement of Responsibility*, Harvard Univ. Press, Cambridge, Mass.: 1956.
4. Wilson, A. T. M.: *The Manager*, 609, September, 1957.

5. *Personnel Correspondence*.
6. *Personal Correspondence*.
7. Ross, W. Donald: *Practical Psychiatry for Industrial Physicians*. Springfield, Ill.: 1956, Charles C Thomas.

PSYCHIATRIC NURSING

LAVONNE M. FREY, R. N.¹

It has been said that in no field of nursing are so many changes taking place as in psychiatric nursing. These changes will ultimately affect the care of all patients everywhere(1). A major concern on the part of psychiatric nurses is their rapidly evolving functions in contributing to the therapeutic community, or the transition from the narrow custodial orientation to that of therapeutic cares. Confusion remains concerning the definition of the psychiatric nurse(2) and in practice this confusion still places undue demands on nurses whose education and experience have not yet prepared them to be clinical specialists. The definition of psychiatric nursing, and the role of the psychiatric nurse need further clarification, but progress is being made by nurses and those from other professions with whom they collaborate in providing care, in the observation and re-examination of the work of nursing personnel with patients(3, 4, 5, 6).

The changes occurring in psychiatric nursing and the resulting tensions which arise in nurse-doctor-patient relationships have been the topic of papers and meeting discussions (7, 8). Sabahin(8) outlines possible solutions to these problems which tend to elicit problem responses from patients.

The goals of the nursing service of a hospital have not often been explicitly stated, but a recent paper(9) outlines these as a basis for staffing a psychiatric research unit. The pattern suggested emphasizes the need for an on-going inservice education program. Time needed for communication to attain the goals was allowed for. Although the need for this kind of communication system has been suggested before, this is the first time to the writer's knowledge that specific

planning by allowing time for it, has been described in the literature.

The development of communication systems and inservice education as utilized in another hospital to facilitate a rehabilitation program for a group of "deteriorated patients"(10) is reported. Progress in a statewide program of inservice education for all nursing personnel is also described(11).

The improvement of psychiatric nursing care has been fostered by the program of the psychiatric nursing services of the National League for Nursing. During 1956 they concentrated on statewide self evaluation activities in 4 states. Continuing these services in 1957, a series of workshops on inservice education were sponsored by The Councils on Psychiatric and Mental Health Nursing of the State Leagues for Nursing. Further follow-up has consisted of two-day institutes for professional and practical nurses and psychiatric aides with emphasis on ward care of patients(12).

Reports have also been made of the nurses' part in newer types of services to the mentally ill such as day care and night care programs(13), inservices to families of hospitalized patients and continued care to patients on discharge from the hospital(14, 15). A successful program offering supportive care to mentally ill patients and to families is reported from Georgia since 1953(16, 17, 18). The lack of planning for nurses to actively participate in such programs of supportive care for patients who might get along outside the hospitals is a continuing concern.

The foundation for effective psychiatric nursing practice is laid in the educational programs of basic nursing schools. The systematic study, and understanding of human behavior have long been considered es-

¹ St. Elizabeths Hospital, Washington, D. C.

essential to nursing care throughout the basic curriculum, also to effective specialization following graduation. Social scientists are contributing to nursing education in this area and one program is described in its second year of experimentation. It is pointed out that one of the most effective ways of integrating social science is in a course, the content of which "must be centered around the particular needs of nurses"(19).

Ways of handling situations difficult for nurses and illustrative of the utilization of such concepts are cited in the literature in articles by nurses. These deal with situations in which the nurse "dislikes a patient" and with the nurse's relations with a crying patient(20, 21). Methods of dealing with such situations are also described(22).

A book for nursing students(23), rich with illustrations of how the meaning of human behavior might be explored represents progress by making real and practical many of the abstract concepts in this area.

Because of limited space only a few research studies in psychiatric nursing education and practice can be reported here. Specific functions of the nurse as an observer in psychiatric research have been described, particularly as an "evaluator of patient behavior"(24, 25), as well as those in which the nurse has acted "as informant" to the senior author(26).

One study reports the study of "the actual technical function of psychiatric nursing in a sample of North Carolina hospitals"(27); another dealt with the nurse in the outpatient psychiatric clinic, with an analysis of types of positions which may be available in such a setting(28). A third study dealt with a program in psychiatric nursing for affiliate students. From the last, it was felt that this study "could not reveal what a nurse . . . might do with time and talents if she were freed from other responsibilities to engage in direct care of patients." It concluded:

... if the psychiatric nurse were freed of many time consuming administrative and clinical functions, more time might be spent in the actual care of psychiatric patients, in teaching and supervising other members of nursing service personnel, and in improving the nurses' knowledge and skill in the care of the psychiatric patient. This improvement was considered necessary before introducing student

nurses into the psychiatric wards for educational experience(29).

Another study deals with the hypothesis that "if a change in the situation is experienced by the chronic patient, it will be accompanied by a change in his behavior"(30). A redefinition of the traditional roles of the nurse and aides was one part of the experimental pattern which resulted in the improvement of patients.

In another investigation the personality make-up of nurses working in psychiatric settings, specifically 4 Veterans Administration hospitals, was studied. This study made use of the Edwards Personal Preference Schedule, and suggested that "the best psychiatric nurses are relatively less timid and more warm in their interpersonal relationships, more stable, and more capable of leadership than the less highly rated nurses"(31).

Much attention was given to both preservice and inservice education of the psychiatric aide or attendant, as a primary concern to most psychiatric hospitals. For example, a 32-week preservice education program for aides is being conducted by a university, and the report of a modified practical nurse program for psychiatric aides may be cited(32). Material for use in the preparation of psychiatric nursing personnel is being outlined by committees under the sponsorship of the National League for Nursing and is expected to have wide distribution.

Sponsored jointly by The American Psychiatric Association and the National League for Nursing a seminar project for teachers of psychiatric aides has been planned. It is hoped that this may be set up on a pilot basis and eventually include teachers of aides in all state hospitals.

The National League for Nursing continues to offer consultation services in nursing education as well as in nursing services. During the year coordination of curriculum development between schools of nursing and psychiatric hospitals has been carried out(33). A Psychiatric Nursing Supplement to the Self-Evaluation Guide for Schools of Nursing has also been prepared.

Of note also is the Conference on Nursing Personnel for Mental Health Programs held in March 1957 in Oklahoma and which

has implications for both nursing services and nursing education. Sponsored by the Southern Regional Educational Board as an activity of the Southern Regional Program in Mental Health Training and Research, future activities will give priorities to a comprehensive study of nurse utilization and to a "survey of all psychiatric facilities offering nursing programs in order to determine the degree of correlation, integration and quality of academic content and clinical practice" (34).

BIBLIOGRAPHY

1. Nahm, Helen: *Nursing Outlook*, 5:89, Feb. 1957.
2. Lewis, Garland K.: (discussion leader). *Mental Hospitals*, 8:30, Feb. 1957.
3. Muller, Theresa G.: *Nursing Outlook*, 5:23, Jan. 1957.
4. Peplau, Hildegard E.: *Neuropsychiatry*, 3:190, Spring 1956.
5. Schmahl, Jane A.: *Nursing Outlook*, 5:458, Aug. 1957.
6. Expert Committee on Psychiatric Nursing. First Report. Geneva: World Health Organization, p. 8, 1956.
7. Goodman, Lillian R.: *Nursing World*, 131:30, June 1957.
8. Sabshin, Melvin: *Am. J. of Nursing*, 57:188, Feb. 1957.
9. Middleton, Agnes B.: *Nursing Outlook*, 5:519, Sept. 1957.
10. Edgar, Helen M.: *Nursing Outlook*, 5:81, Feb. 1957.
11. Salsman, Lillian V., and Abrahamer, Cecilia T.: *Nursing World*, 131:7, March 1957.
12. Council on Psychiatric and Mental Health Nursing, N.L.N. *Newsletter*, Sept. 1957, 1; March 1957, 2.
13. Prowse, Margaret S.: *Nursing Outlook*, 5:518, Sept. 1957.

14. French, Mary Anne: *Nursing Outlook*, 4:572, Oct. 1956.
15. Rice, Guy V.: *Am. J. of Pub. Health*, 47:210, Feb. 1957.
16. Beasley, Florence A., and Rhodes, W. C.: *Nursing Outlook*, 4:444, Aug. 1956.
17. *Public Health Reports*, 72:265, March 1957.
18. Ashford, Mary E.: *Am. J. of Nursing*, 57:206, Feb. 1957.
19. Macgregor, Frances Cooke: *Am. J. of Nursing*, 57:899, July 1957.
20. Hightley, Betty Lee, and Norris, Catherine M.: *Am. J. of Nursing*, 57:1163, Sept. 1957.
21. Norris, Catherine M.: *Am. J. of Nursing*, 57:323, March 1957.
22. Fernandez, Theresa M.: *Am. J. of Nursing*, 56:1567, Dec. 1956.
23. Muller, Theresa G.: *The Foundations of Human Behavior*. New York: G. P. Putnam's Sons, 1956.
24. Weber, Marilyn: *Nursing World*, 131:7, June 1957.
25. Carey, Blaine, Weber, Marilyn M., and Smith, Jackson P.: *Am. J. of Psychiatry*, 113:546, Dec. 1956.
26. Perry, Stewart E., and Shea, Gertrude N.: *Psychiatry*, 20:221, Aug. 1957.
27. Martin, Harry W., and Simpson, Ida Harper: *Patterns of Psychiatric Nursing in North Carolina*. (c) American Nurses Foundation Inc., 1956.
28. Adamson, Frances K.: *Nursing Outlook*, 5:24, Jan. 1957.
29. Stevens, Phillipa B., and Halpert, Priscilla W.: *Nursing Research*, 6:34, June 1957.
30. Pace, Robert E.: *Mental Hospitals*, 8:10, May 1957.
31. Navran, Leslie, and Stauffacher, James C.: *Nursing Research*, 5:109, Feb. 1957.
32. Crawford, Annie Laurie, Hahn, Ruth G., and Sister Mary Dorothy: *Nursing World*, 131:25, June 1957.
33. Council on Psychiatric and Mental Health Nursing, N.L.N. *op. cit.*, March 1957.
34. SREB. Memorandum (June 20, 1957) to participants in Conference on Nursing Personnel for Mental Health Programs. Mimeographed.

REHABILITATION AND OCCUPATIONAL THERAPY

FRANKLIN S. DuBOIS, M.D.¹

Certainly the most interesting and perhaps the most significant developments in the field of rehabilitation and occupational therapy during the past year have been the many evaluations of currently active programs and the intensified search for new and better methods of restoring the emotionally ill and the physically ill. Marrin and Shain(1) conclude from their evaluation that workers in

the field have failed to recognize the importance of gathering data so that rehabilitation programs can be scientifically appraised. They make a plea for more and better research within existing agencies. Dabelstein(2) reviews the projects being carried out under Public Law 565, a statute under which the Federal Government assists the states in establishing and operating services to rehabilitate mentally and physically

¹ New Canaan, Conn.

handicapped persons. One of the projects he surveys will, when completed, include the development of a number of new types of services for psychiatric patients. The Rehabilitation Policy Committee of the National Rehabilitation Association(3) examines rehabilitation legislation and its effect upon operating programs and decides that there is widespread acceptance of existing laws. The Committee recommends the expansion of rehabilitation facilities for groups not receiving adequate help, among which are the mentally ill and other severely disabled persons(4). This expansion will be facilitated by the increased funds now available to provide for more workers(5) and for additional rehabilitation centers(6). The American Orthopsychiatric Association(7) appraises the problem of rehabilitation in the individual, including the important factor of rehabilitation potential and the Fifth Annual Workshop at the Conference on Rehabilitation Centers(8) specifies what the patient, the physician and the community expect and need from a rehabilitation center. Those interested should consult the sources(1, 2, 3, 4, 5, 6, 7, 8) for a wealth of detailed information on these several subjects.

The search for new and better methods of restoring psychiatric patients has been stimulated during the past year by a new type of financial support called "Mental Health Project Grants"(9). These gifts are offered by the National Institute of Mental Health for the express purpose of developing improved methods of care, treatment and rehabilitation of the mentally ill. One such grant has made possible a summer camping project for approximately 100 chronically ill male patients selected from Connecticut's state mental hospitals(10). In this initial experiment in outdoor living 40% of the patients participating showed improvement(11). In another new step designed to set a better climate for mental health, the State of Washington has developed a program directed toward the reduction of dependency in certain persons on public assistance(12). Because authorities(13, 14, 15) agree that an increased number of adequately trained rehabilitation workers is essential if techniques of restoration are to be improved, the National Foundation for Infantile Paralysis

is sponsoring the development of additional well-qualified personnel by offering postdoctoral fellowships in rehabilitation, monthly stipends for vacation study in rehabilitation, and teaching fellowships to occupational therapists(16).

Another important recent development is the changing concept of the rehabilitation center and the changing attitude toward the process of rehabilitation. Whereas, originally it was believed that the purpose of a rehabilitation center was to house all restorative facilities under one roof, at the present time it is thought that this is not practicable(17). Furthermore, it is held that both medically and vocationally oriented centers are necessary(18). Earlier, the rehabilitation effort was directed toward the restoration of a particular individual from a particular disablement. Now, however, the emphasis is placed on treating the total person(19, 20, 21), on the importance of teamwork among the various disciplines involved in the rehabilitation effort(17, 19, 22, 23) and on the great significance of the spirit and morale of the rehabilitation team(23, 24). It is generally recognized that the psychiatrist's principal responsibility in such a program is to furnish leadership(23) and to achieve smooth interpersonal relationships among those participating in the effort to restore(25).

Motivation of the mentally ill has continued to hold a prominent place in the thinking of psychiatrists. A report from the Annual Meeting of The American Psychiatric Association(26) stresses the prime significance of fostering individual confidence and individual desire for restoration. Phillips(27) warns that it is not always correct to assume that a patient who is not cooperative in treatment is not motivated. He believes that the unmotivated state may actually be due to excess motivation which precipitates multiple failures and that a therapist with an aggressive approach may push the patient toward further discouragement. Miller(28) makes a significant contribution to the subject as she reviews the major theories of motivation as conceived by Freud, Horney, Adler, and Maslow. From her report one cannot help but conclude that motivation is a complex phenome-

non and that much more must be known about it before the psychiatrist can speak authoritatively on the subject of why sick people do or do not try to get well.

Moving the mentally ill person back into his home and into his job is being more generally recognized as a responsibility of the community as well as of the psychiatrist. Locher(29) says categorically that, "Final success in rehabilitation rests upon community participation." Allen(30) likewise emphasizes that rehabilitation is a community problem, and a recent symposium(31) stresses the importance of the general practitioner in helping the patient resume his normal way of life. Whitely(32) even envisions a time in the future when both psychiatric treatment and rehabilitation will be entirely extramural. Numerous authors describe methods of bridging the gap between the hospital and the home. Reimer(33), Marra, Moore and Young(34), Smith(35), and Jones(36) give accounts of programs under which psychiatric patients work for pay in industry while still under treatment in institutions, thus learning to adjust to actual working conditions. Black(37) and Gellman(38) discuss the value of the post hospital transitional workshop and a recent publication(39) offers detailed information about the geographic location of workshops and the types of service offered. Aldrich(40) points out how the Homemaker Service (an organization that supplies mother substitutes for homes in which mothers are hospitalized for mental illness) can aid in restoring the psychiatrically ill. Olshansky(41) evaluates rehabilitation counselor training and a special issue of the *Journal of Rehabilitation*(42) emphasizes the increasingly prominent place of the counselor in helping the patient take up his life at home.

Forster(43), Cath(44), Schuleman(45), Reichel(46), Fensterheim(47), and the Bryn Mawr Institute on Rehabilitation(48) lay stress upon an appreciation of the emotional attitudes of the physically disabled and indicate how appropriate psychiatric approaches and techniques can reassure such patients and facilitate their rehabilitation. Perderber(49) offers the opinion that many, if not most, aging persons can best be cared

for in the home rather than in an institution and that the restoration of older people must be handled not only in the medical, but also in the economic social spheres.

The reader's attention is directed to a description of the new World Rehabilitation Fund, Inc.(50) for an understanding of the contribution of the United States to the disabled throughout the world, to Pollack's study(51) for a consideration of the future needs of rehabilitation, and to a report of the Committee on Rehabilitation of the American Medical Association(52) for an account of that Association's active participation in matters pertaining to rehabilitation.

Dunton and Licht(53) present an extensively revised second edition of their *Occupational Therapy: Principles and Practices*. The distinguished contributors to this work have brought their chapters up to date and several new subjects are considered. Special mention should be made of new sections on music therapy and psychiatry. Throughout the book emphasis is placed on the practical application of occupational therapy in various illnesses, including psychiatric disorders. The recently published *Occupational Therapy Manual for Personnel* in the New York State Department of Mental Hygiene(54) is a valuable source of information on the operation of occupational therapy services for the mentally ill and the new *Objectives and Functions of Occupational Therapy*(55) is an excellent guide for physicians prescribing occupational therapy.

Reports from the Conference of the American Occupational Therapy Association offer much of interest to psychiatrists. Glueck(56), Mattson(57), and Hetzler(58) discuss regressive electroshock therapy and the place of occupational therapy in the care of patients undergoing this type of treatment. Scheeley(59) points out that inasmuch as the ataractic drugs make large numbers of previously untreatable patients amenable to ancillary forms of therapy, the demands placed on occupational therapy have increased. Doniger(60) emphasizes the importance of recreation as treatment, Sterling(61) examines the problem of prescribing recreation for children, and Stachowiak(62) considers recreational therapy in its relation

to milieu therapy programs. Dally(63) reports on the work being done on a psychosomatic-pediatric ward. He states that the therapeutic program offers children experience with mother figures and provides an environment conducive to ego growth. Johnson(64) stresses the need for a full understanding of the normal behavior of the adolescent if abnormal behavior of the teenager is to be understood. She illustrates some of the problems the occupational therapist may encounter in dealing with adolescents suffering from emotional disorders. Wegg(65) describes the role of the occupational therapist in vocational rehabilitation and mentions the importance of activities that simulate actual on-the-job conditions. Walker(66) questions whether occupational therapists have adequate backgrounds to carry out prevocational guidance and suggests a special research project to study the problem. Kaplan(67) makes the interesting observation that 10% of the American people are 65 years of age and over and that these individuals consume 20% of hospital care services; consequently he believes that the nursing home will and must assume an increasingly important role in the care of the aged.

Meyerson(68) presents his ideas about the various psychological roles of the occupational therapist and urges studies that will accurately define the underlying psychological rationale of occupational therapy and give a more precise definition of "the conditions under which the various activities of occupational therapy are beneficial." Galvin, MacDonald and Balliet(69) outline a new plan for more meaningful participation of the occupational therapist in the care of psychiatric patients and suggest how occupational therapy can contribute to diagnosis as well as to treatment. Niswander, Haslerud, and Dixey(70) report that the behavior of the occupational therapist affects the acutely psychotic patient's sociability while Dixey, Haslerud and Brown(71) delineate the part played by the occupational therapist in the total treatment program. The last study, prompted by that of Hyde and Scott(72) which held that in occupational therapy patients are usually overcontrolled, overprotected and overdirected,

shows that the occupational therapist does not primarily demonstrate skills but rather, if he is successful, establishes good personal relationships with patients. Licht(73) is critical of the authors' methods but expresses the hope that others will explore the same problem. Azima and Wittkower(74) conclude from their observations that too much attention has been put on the diversional and occupational aspects of activities to the neglect of the psychodynamic problems of patients participating in occupational therapy.

These provocative publications on the psychological aspects of occupational therapy (68, 69, 70, 71, 72, 73, 74) clearly indicate that occupational therapy is entering a new era—an era that will take it out of the category of time consuming "busy work" into a place of importance as a tool in total psychotherapy. New vistas for investigation are being opened and only when these vistas have been scientifically evaluated will the true significance of occupational therapy as a diagnostic and a remedial agent be understood and appreciated. A few encouraging steps have been taken in this direction. Ireland(75) describes a work evaluation report which provides for a combination of check-off and written reporting on patient progress in therapy. O'Reilly(76) indicates the various types of occupational therapy needed during particular stages of rehabilitation, and Fidler(77) discusses the four-fold purpose of occupational therapy in treatment: to make a significant contribution to the milieu of the hospital community, to augment formal psychotherapy, to provide data for use in evaluation and diagnosis and to assist the patient in undertaking appropriate economic and social responsibilities.

BIBLIOGRAPHY

1. Marrin, A., and Shain, I.: *J. Rehab.*, 23:7, 1957.
2. Dabelstein, D.: *Ibid.*, 23:4, 1957.
3. *Ibid.*, 22:4, 1956.
4. Whitten, E.: *Ibid.*, 23:1957.
5. Whitten, E.: *Ibid.*, 23:1957.
6. Redkey, H.: *Am. J. Occup. Ther.*, 11:20, 1957.
7. *Am. J. Orthopsychiat.*, 27:9, 1957.
8. Workshop Findings, Fifth Annual Workshop. Conference of Rehabilitation Centers, 1956.

9. A.P.A. Newsletter, Jan. 15, 1957.
10. Research and Training Bulletin, State of Connecticut Department of Mental Health, Vol. II, Feb.-Mar. 1957.
11. Annual Administrative Report—1957, State Department of Mental Health of Connecticut.
12. Oliver, E., and Elder, J.: *J. Rehab.*, 22: 4, 1956.
13. Rusk, H., and Benton, J.: *NY State J. Med.*, 56: 878, 1956.
14. Rusk, H. J. *Rehab.*, 23: 1957.
15. Whitten, E.: *Ibid.*, 23: 4, 1957.
16. News Items, *Ibid.*, 23: 23, 1957.
17. Redkey, H.: *Arch. Phys. Med. and Rehab.*, 38: 227, 1957.
18. Gorthy, W.: *J. Rehab.*, 23: 7, 1957.
19. Bach, F.: *Soc. Service Quart.*, 30: 74, 1956.
20. Braceland, F.: *The Crippled Child*, 1: 856, 1956.
21. Nemiah, J.: *Arch. Phys. Med. and Rehab.*, 38: 143, 1957.
22. Lemieux, R.: *Can. J. Occup. Ther.*, 24: 5, 1957.
23. Braceland, F.: *J.A.M.A.*, 165: 211, 1957.
24. Stanton, A., and Schwartz, M.: *The Mental Hospital*. New York: Basic Books, Inc., 1954.
25. Greenblatt, M., Landy, D., Hyde, R., and Bockhoven, J.: *Rehabilitation of the Mentally Ill; Impact of a Project Upon Hospital Structure*. In press.
26. Program of the 113th Annual Meeting of the A.P.A., 1957, p. 62.
27. Phillips, E.: *J. Rehab.*, 23: 10, 1957.
28. Miller, H.: *Am. J. Occup. Ther.*, 10: 296, 1956.
29. Locher, R.: *Ibid.*, 11: 154, 1957.
30. Allan, W.: *Connecticut M.J.*, 21: 816, 1957.
31. Rusk, H.: *J. Maine M.A.*, 47: 346, 1956.
32. Whiteley, J. *Rehab.*, 19: 15, 1956.
33. Riemer, D.: *Brit. J. Phys. Med.*, 29: 269, 1956.
34. Marra, J., Moore, A., and Young, M.: *J. Rehab.*, 23: 10, 1957.
35. Smith, H.: *Am. J. Ment. Def.*, 61: 665, 1957.
36. Jones, M.: *Lancet*, 271: 985, 1956.
37. Chouinard, E., and Garrett, J.: *Workshops for the disabled; a vocational rehabilitation resource*. Washington: Government Printing Office, 1956.
38. Gellman, W.: *J. Rehab.*, 23: 9, 1957.
39. *Directory of Sheltered Workshops and Homebound Programs*. New York: The Association, 1957.
40. Aldrich, C.: *Program of the 113th Annual Meeting of the A.P.A.*, 1957, p. 91.
41. Olshansky, S.: *Voc. Guidance Quart.*, 5: 164, 1957.
42. *J. Rehab.*, 23: 3, 1957.
43. Forster, F.: *J.A.M.A.*, 163: 102, 1957.
44. Cath, S.: *Psychoanalyt. Rev.*, 44: 34, 1957.
45. Schuleman, I., and Fields, W.: *Texas State J. Med.*, 52: 310, 1956.
46. Reichel, S.: *Arch. Phys. Med. and Rehab.*, 38: 307, 1957.
47. Fensterheim, H.: *Am. Arch. Rehab. Ther.*, 5: 41, 1957.
48. Bryn Mawr College Department of Social Economy and Social Research Institute on Rehabilitation. Bryn Mawr: The College, 1956.
49. Ferderber, M.: *J.A.M.A.*, 162: 11, 1956.
50. News Stand. *J. Rehab.*, 23: 26, 1957.
51. Pollack, J.: *Ibid.*, 23: 4, 1957.
52. Report of the Committee on Rehabilitation, *J.A.M.A.*, 164: 2045, 1957.
53. Dunton, W., and Licht, S.: *Occupational Therapy: Principles and Practices*. Springfield, Ill.: Charles C Thomas, 1956.
54. *Occupational Therapy Manual for Personnel in the New York State Department of Mental Hygiene*. Albany: State of New York Department of Mental Hygiene, 1956.
55. *The Objectives and Functions of Occupational Therapy*. New York: American Occupational Therapy Association, 1956.
56. Glueck, B.: *Am. J. Occup. Ther.*, 11: 216, 1957.
57. Mattson, G.: *Ibid.*, 11: 217, 1957.
58. Hetzler, P.: *Ibid.*, 11: 219, 1957.
59. Scheeley, W.: *Ibid.*, 11: 220, 1957.
60. Doniger, J.: *Ibid.*, 11: 243, 1957.
61. Sterling, H.: *Ibid.*, 11: 248, 1957.
62. Stachowiak, J.: *Ibid.*, 11: 245, 1957.
63. Dally, A.: *Ibid.*, 11: 261, 1957.
64. Johnson, A.: *Ibid.*, 11: 255, 1957.
65. Wegg, L.: *Ibid.*, 11: 252, 1957.
66. Walker, R.: *Ibid.*, 11: 250, 1957.
67. Kaplan, J.: *Ibid.*, 11: 240, 1957.
68. Meyerson, L.: *Am. J. Occup. Ther.*, 11: 131, 1957.
69. Galvin, J., MacDonald, J., and Balliet, H.: *Ibid.*, 11: 188, 1957.
70. Niswander, G., Haslerud, G., and Dixey, E.: *Ibid.*, 11: 269, 1957.
71. Dixey, E., Haslerud, G., and Brown, N.: *Ibid.*, 10: 298, 1956.
72. Hyde, R., and Scott, B.: *O. T. and Rehab.*, 30: 133, 1951.
73. Licht, S.: Letter to the Editor, *Am. J. Occup. Ther.*, 11: 35, 1957.
74. Azima, H., Wittkower, E.: *Ibid.*, 11: 1, 1957.
75. Ireland, K.: *J. Rehab.*, 23: 8, 1957.
76. O'Reilly, D.: *Hospitals*, 30: 36, 1956.
77. Fidler, G.: *Am. J. Occup. Ther.*, 11: 8, 1957.

PSYCHIATRIC SOCIAL WORK

MARGARET L. NEWCOMB¹

Psychiatric Social Workers today are re-examining their traditional area of practice for deeper definition. In addition, with the ever-increasing national and international emphasis on mental illness and health they are giving thoughtful examination to those expanding avenues of practice developing within the framework of the profession. Not only is the present emphasis on the rehabilitation of the patient in the hospital and community, but more and more the focus is being placed on prevention of mental illness. In answering the demands resulting from these trends, the roles of the social workers will change. This continuing study will delineate more clearly our functions in these areas and in our rapidly maturing profession. How can psychiatric social work participate fully in imaginative and creative programs for prevention of mental illness?

As the communities mobilize their interest towards effecting programs in mental health, the psychiatric social worker is called upon to extend and widen her services beyond that of direct treatment to assist in studies of communities' needs such as services for children and adolescents. The services of the psychiatric social worker have widened to include such functions as consultation to community agencies and organizations and participation and leadership in community surveys on mental health needs.

The psychiatric social worker acts, also, as case consultant within the social work profession for the interpretation of the psychopathology of patients for the community agencies in programs of prevention and treatment. In this way the body of knowledge which the psychiatric social workers have gained through clinical experience is now being translated into helping the personnel in community agencies who are working with mentally ill patients and their families in order to help them to understand mental illness better and to develop with them adequate methods and standards to meet these problems.

Increasingly, as resources in communities

are being drawn upon to provide assistance to the mentally ill outside of psychiatric settings, all the members of the traditional clinical teams are being called upon to adapt their roles in relation to other professions in the community who are working with the mentally ill person and his family. As a member of the team, the psychiatric social worker will interpret to the psychiatrist, as the medical authority in the mental health fields, so that he may understand more fully the other fields of social work practice, as they relate to total rehabilitation and preventive programs in the area of mental health. The relationships between psychiatrist and psychiatric social worker have developed so that the psychiatrist recognizes psychiatric social workers as the traditional collaborators from the field of social work, interpreting the social and environmental factors impinging on the illness. Therefore, the collaborative role in the practice of the psychiatric social worker is better understood and has particular significance for him. In keeping with this role is the interpreting of other fields of social work practice to him.

Another expanding area of practice is the use of group process by the psychiatric social worker in hospitals and clinics as leader or co-leader in treatment groups of patients and relatives. Because this practice is growing so rapidly, the Committee on Practice of the American Association of Psychiatric Social Workers, now the Psychiatric Social Work Section of the National Association of Social Workers, has conducted surveys, to be compiled for publication to ascertain the number of psychiatric social workers leading groups, and the philosophies, methods and goals which are guiding their work.

It is hoped to clarify further the training and supervision or consultation standards to insure sound professional performance. These findings will have implications for social work education and in-service training. It is recognized that the use of the group process adds a new dimension to the field of psychiatric social work which

¹V.A. Hosp., 150 South Huntington Ave., Boston 30, Mass.

will widen the scope and effectiveness in rehabilitation of mentally ill patients. Increased understanding of how individual patients behave in groups may increase diagnostic understanding of behavior in resocialization.

To further the study of the psychiatric social worker's use of group dynamics and to define similarities and differences of the social group worker's use of group methods in psychiatric hospitals and clinics, this year's Institute is to be held June 1958 at the Kellogg Institute in East Lansing, Michigan. Experienced practitioners working with groups are being invited from all regions of the country and Puerto Rico, to this Institute supported by a grant from the National Institute of Mental Health. Many areas are to be discussed such as the principles of leadership in groups, group interaction, and evaluatory methods for measuring movement in groups. Proceedings of the Institute will be published as soon as possible to assist and enhance the practice of the profession.

The Institute in Teaching Methods in Psychiatric Social Work was held in Atlantic

City in June 1957. It was the second in a series of Institutes on teaching in the psychiatric social work sequence which have been financed through grants by the National Institute of Mental Health. Miss Charlotte Towle, one of our outstanding educators was the leader of the Institute and with the assistance of an advisory committee, she will edit the proceedings for publication. Faculty members teaching psychiatric social work in fifty schools of social work, including Canada and Puerto Rico, participated. The material from the workshops was stimulating and provocative. This Institute was one of the first planned programs by the Professional Education Committee of the Psychiatric Social Work Section of the National Association of Social Workers, to examine the organization and presentation of materials and methods in teaching social work in a scientific, orderly fashion. In addition, this Committee is gathering case records for teaching directly from practice on a regional basis. It is expected that both of these activities in the field of education will strengthen and enrich the total profession.

FAMILY CARE AND OUTPATIENT PSYCHIATRY

WALTER E. BARTON, M.D.¹

"A significant group of hospital admissions may be treated either as inpatients in a State hospital or as outpatients in a community setting." This assumption was tested by Sampson(1) in 3 California State hospitals (Agnew, Napa, Stockton), and 2 community outpatient clinics. Even numbered new admissions from 5 counties were sampled for a 3-month period. (Patients admitted on observation or as a transfer, or return from indefinite leave, or obviously requiring hospital care, were excluded.)

There were 583 even numbered admissions from the 5 counties. Ninety-one percent of the cases or 504 met the sampling criteria. Only 6 of the 504 newly admitted patients were accepted for outpatient status. Only 4 actually received outpatient treatment and only 2 of these were judged to have benefited from it. Perhaps it is true, as they conclude,

that hospitals and clinics by and large have distinctive and only rarely supplementary rather than identical and competing functions in the care of the mentally ill. Errera(2) conducted a 16-year follow-up of schizophrenic patients seen in an outpatient clinic. Fifty-four patients were followed. These came predominantly from a low social economic class, and were first diagnosed as schizophrenic during adolescence. Fifty-eight percent had less than 5 interviews, 35% from 5 to 25 interviews and 7 over 25 interviews. The results of treatment were: 1. Good adjustment, 26%. (A good work record in one job for at least 3 years, with evidence of active community and social interaction and no bizarre symptomatology, etc.) 2. Poor adjustment, 48%. (Most were severe psychotics, 12 were on the chronic wards of state hospitals, the remaining half lived at home, 5 of these had been lobotomized. No signifi-

¹ Superintendent, Boston State Hospital, Boston, Mass.

cant level of maturity.) 3. Mediocre adjustment, 26%. (The majority of these had been hospitalized for brief periods of time, most lived with their parents and had their work as their only outside interest.)

The VA Mental Hygiene Clinic(3) in Los Angeles had a stable staff during a study of changing concepts in therapy that fell into 4 phases: 1. "Hostility is not enough." The clinic staff worked primarily on the basis of the assumption that patients suffered severe deprivations and frustrations in the Army. Abreaction of these experiences were encouraged with expression of their hostility and aggressive feelings. It was found that this orientation did not suffice, for patients might have the ability to express hostility but no capacity to channel it into appropriate and effective action. 2. "Love and affection is not enough." The staff acted and saw themselves as wise, benevolent, forgiving parents who were filled to overflowing with loving kindness and helpfulness. Patients were granted extra interviews, allowed to become dependent, and treated so well they often felt guilty. Staff found themselves becoming indispensable to patients, and the patients becoming indispensable to the staff. 3. "Interpretation is not enough." As the staff became more cohesive and able to talk a common language, interpretations were used as the primary tool for dealing with hostility, dependency, hate, rejection, frustration, family situations, and so on. 4. "Integration is not enough." There is more to the ego than defense and more to ego strength than ability to handle crucial situations and to develop adequate mechanisms for defense. The ego has a coordinating integrative and synthetic function as well as a defensive function. The author believes the staff may come to an ecological stage when they will inquire more into the nature of societal meaning.

A Well-Being Clinic at McGill University (4) developed out of a concern for 10 overweight patients. To discussion of the aspects of obesity, lectures were added in adjustment to living. These were expanded to include health and charm courses and courses in understanding one's self. Finally, mental health films and discussions of mental health mechanisms were included in the first hour, then the group divided into units of 20 under

a group leader for a discussion period afterwards. It was felt that the Well-Being Clinic encouraged people to seek help for emotional problems where the health orientation was a positive rather than a negative one. The ordinary citizen found the clinic a place to "check-up" his mental health.

Kramer(5) highlights the need for better reporting of statistics that will be useful to all mental hygiene clinics. Brown(6) describes a traveling clinic in a rural community in Utah. Efforts were directed toward training the people who would be responsible for the care of patients such as teachers, public health nurses, sheriffs, and citizens with a minimum of time devoted to the patients.

Coleman(7) believes only a few persons with psychiatric problems in a community get into treatment in a psychiatric clinic. He sought to learn how social agencies identify psychiatric problems; what kind of help seems wanted and what help is actually given. One hundred and fifty-eight applicants to a psychiatric clinic in New Haven representing 158 different families and 112 applicants to the New Haven Family Service, representing 99 different families, were studied. Of the total of 270 applicants, 163 were accepted for further investigation and treatment. Two-thirds of these were from higher social groups than were the more than one-half of all cases closed at intake. There was no essential difference in the diagnostic groups of those accepted by the 2 agencies with a slightly higher incidence of psychosis at the clinic.

Blair(8) reports on a 2-year follow-up of 235 cases selected from about 3,226 cases. All had neuroses and were treated as out-patients with brief psychotherapy. The average number of sessions per patient was 7. Forty percent were much improved, 32% were improved, and 15% were not improved. The remaining 13% was either untraced or had died.

Family Care.—In spite of the generally reported difficulty in securing sufficient social workers to supervise patients in foster homes, that has served as the principal inhibiting factor on the growth of family care everywhere, there continues to be a gradual expansion of the number of patients placed each year in family care.

Table 1 indicates that in 1957, there were 8,824 patients in family care, as compared with 4,937 in 1951.

Cumming (1) analyzed the development of foster home program in 32 NP VA Hospitals. From 185 psychotic patients placed in 1951, the program has grown to 797 in 1955. Twenty percent of the patients placed were discharged from foster home care during the year. Seven percent more were transferred to trial visit and 17% of the patients were returned to the hospital and remained in the hospital. About 56% of the patients placed had been hospitalized from 1 to 9 years and 32% had been hospitalized for 10 years and over. Only 10% of the group had been hospitalized less than a year. The article describes the factors to be looked for in a foster home and in the patient best suited for placement.

Bishop (2) considers the use of family care for the mentally handicapped as an alternate to life-time custodial care. It benefits the retarded patient and creates bed space for those who need admission to training schools and hospitals. Preplacement studies are recommended for they reduce returns to the institution. Family care also helps the community to accept the demonstrated fact that the severely mentally handicapped can adjust in homes.

In personal communications to the author, the following additional information regarding family care, was worthy of note. Roberts (4) stated that in Ontario, foster homes have

been used for chronic and convalescent patients for many years. Other provinces in Canada have made little use of this type of care. Provision for payment of board for family care patients has been made also in Saskatchewan and in Manitoba. In Manitoba, foster care homes are largely used for the care of mental defectives. The board may be paid to the families of patients who are experiencing financial hardship. In Newfoundland and British Columbia, Departments of Public Welfare finance boarding home care. As statistics are not available for Canada, it is interesting to note that at the end of the calendar year 1955, the one province, Ontario, had 794 patients in approved foster care homes.

Benbow (4) from the Florida State Hospital, calls attention to the problem of the state hospital that serves patients who come from as far away as 750 miles. They found it important to limit the family care homes' distance from the hospital to a radius of 50 miles.

DeWitt (5) notes that nearly one-third of patients placed in foster home care in Maryland were discharged during the year. Twenty case workers are assigned to the program, each with an average case load of 30.6 patients.

Chamberlain (6) indicates that the purpose of family care in Ohio is to provide a bridge between the mental institutions and community living, where support by the patient's family does not exist, or the family situation is not conducive to the ultimate recovery of the patient.

Crutcher (7) indicates in New York State, 203 patients out of 1,445 patients in family care from the state hospitals, were placed on convalescent care and out of 887 patients placed from the schools for the mentally defectives, 27 patients went on convalescent care. This source of exit from the hospital has been used particularly in the placement of the aging who have responded to the intensive treatment program, and for patients whose illness has been of long duration, who have responded to the newer drug therapies.

Foster home care serves as a supportive environment for them while they learn to adjust to life and to gain the necessary confidence to find work or to make other plans in keeping with their capacities. The advent of pressure for more "open hospitals" has

TABLE 1

PATIENTS IN FAMILY CARE IN THE UNITED STATES
AS OF JUNE 30, 1957

New York	2,371
Michigan	1,435
California	1,100
Illinois	1,032
Pennsylvania	647
V. A. Hospitals	627*
Ohio	572†
Maryland	448
Massachusetts	271
Rhode Island	253
Connecticut	40
Florida	19
Virginia	9
Total (1957)	8,824
1956	8,283
1951	4,937

* As of December 31, 1956.

† As of June 30, 1956.

increased the pressure on social workers to find homes and make more placements. Here, as everywhere else, the insufficient number of social workers holds back the development of the program.

A survey indicates that it is easier for a patient to go on convalescent care from family care than for him to leave the hospital directly, unless his illness has been of reasonably short duration, and unless he has a family who will readily accept him.

Wilsnack(8). A survey was conducted by the Bureau of Social Work of California in the 10 months' period from July, 1956, through April of 1957, of patients in "Half Way Houses in Family Care." There were 87 such patients, 19% of all patients placed in family care in the region during that period. Forty-one, nearly half, had moved on to another living plan within six months of the date of placement. Thirty-one patients secured employment within one month of placement and 27 more within the next two months. The other half of the patients still remained in placement at the end of the 10 months' study period.

The Family Care Committee in California also studied the use of group approaches within the hospital for orientation and preparation of patients for family care placement. There were 9 such study groups directly concerned with family care and 41 others in which family care was not the primary focus but during which consideration came actively into play.

The tendency of patients in the group was to reveal their negative attitudes toward family care and express concern about unknown factors such as rules, restrictions, clothing, expense money, board and care, jobs, etc. They felt that the group method was useful in overcoming the negativistic attitudes and in preparing patients for family care. Another stimulus to the growth of the program in California was a recognition by the Legislature of the increasing costs of maintaining patients in the community to caretakers, with the maximum amount now provided of \$100 a month for board and room for patients in family care.

BIBLIOGRAPHY

Out-Patient Psychiatry:

1. Sampson, Harold: Research Report No. 1, Department of Mental Hygiene, Sacramento, Cal.

2. Errera, Paul: *Arch. of Neurol. and Psychiat.*, 28:84, July 1957.
3. Pumpian-Mindlin, E.: *Am. J. Psychiat.*, 113: 1095, June 1957.
4. MacLeod, A. W., Silverman, B., and Poland, Phyllis: *Am. J. Psychiat.*, 112:795, March 1957.
5. Kramer, Morton: *Am. J. Orthopsychiat.*, 27: 643, July 1957.
6. Brown, William H., Taboreff, Leonard, Goates, Bruce L., and Madsen, Carlos N.: *Ment. Hyg.*, 41:372, July 1957.
7. Coleman, Jules V., Janowicz, Ruth, Fleck, Stephen, and Norton, Nea: *Social Case Work*, 38:3, Jan. 1957.
8. Blair, R., Gilroy, J. M., and Pilkington, R.: 5014:318, 1957.

Family Care:

1. Cumming, Roger, and Grant, Irene, and Virginia Karl: Foster Home and Other Trial Visits for Psychotic Patients; Developments in the V. A. in 1954 and 1955; Part I. Information Bulletin, Department of Medicine and Surgery, Office of the Chief Medical Director, Veterans Administration, Washington, D. C.
2. Bishop, E. B.: *Am. J. of Ment. Def.*, 61:583, Jan. 1957.
Reports of family care obtained by personal communication from:
3. Roberts, C. A., M.D., Principal Medical Officer, Mental Health, Department of National Health and Welfare, Ottawa, Can.
4. Benbow, J. T., M.D., Clinical Director, Flora State Hospital, Chattahoochee, Fla.
5. DeWitt, Henrietta B., Director of Social Services, Department of Mental Hygiene, State of Maryland, Baltimore, Md.
6. Chamberlain, Grover B., Supervisor, Bureau of Research and Statistics, Department of Mental Hygiene and Correction, Columbus, Ohio.
7. Crutcher, Hester B., Director, Social Services, Department of Mental Hygiene, Albany, N. Y.
8. Wilsnack, William H., Assistant Chief of Social Service Department of Mental Hygiene, Sacramento, Cal.

Also from:

- Stehman, V. A., Deputy Director, Department of Mental Health, Lansing, Mich.
- Funkhouser, James B., Assistant to the Commissioner, Commonwealth of Virginia, Richmond, Va.
- Marsh, Elias J., M.D., Acting Commissioner, State of Connecticut, Division of Community Services, Hartford, Conn.
- Cumming, Roger, Director, Social Work Service, Veterans Administration, Wash. 25, D. C.
- Calloway, Annette, Chief of Social Service in Institutions, Department of Public Welfare, Chicago, Ill.
- Pugh, T. P., M.D., Director of Statistics, Department of Mental Health, Boston, Mass.
- Green, Sylvia B., Psychiatric Social Work Coordinator, Bureau of Mental Hospital Services, Department of Welfare, Commonwealth of Pennsylvania, Harrisburg, Penna.

FORENSIC PSYCHIATRY

WINFRED OVERHOLSER, M.D.,¹ AND WILLIAM J. T. CODY, M.D.²

Current articles and books reflect an increasing awareness of the Durham Rule and its implications, both social and psychiatric. Mr. Justice William O. Douglas(1) in a paper on "Law and Psychiatry" reviews briefly the M'Naghten Rules and the Durham decision and finds the latter praiseworthy. Fortas(2) likewise finds much that is commendable in the decision. However, the general resistance of the courts continues; in at least 6 jurisdictions the formulation has been rejected without considering the merits(3). Maryland has indicated that it has no desire to join the Courts of New Hampshire and the District of Columbia in their "magnificent isolation of rebellion against M'Naghten"(4). Wright(5) reaffirms the use of the M'Naghten rules and the irresistible impulse test in Connecticut. A recent Canadian decision(6) answers somewhat ambiguously the question "Can a physical disease (cerebral arteriosclerosis) be regarded as a disease of the mind?" Snyder(7) contributes a stimulating article, "Who is Wrong About the M'Naghten Rules and Who Cares?", an article which raises far more questions than it answers, including some comments about why, in the first place, a mentally ill person should not be held responsible for a criminal action.

In Massachusetts, Cohen, Sears and Ewalt (8), in their observations on the Chapin Case, recommend that more positive dynamic reports be submitted under the provisions of the Briggs Law rather than negative reports which discuss only the absence of certain signs and symptoms. Another source(9) in writing about a different facet of the Briggs Law recommends that pre-trial psychiatric examinations be made available to the defense, even if the report indicates that there is no evidence of mental disease. Monsignor Hayes(10) discusses the problems of the Catholic Ecclesiastical Courts in determining pleas for nullity of marriage on the grounds of insanity. Hiltman(11) discusses psychological techniques for determining the reliability of children's evidence, especially

in cases of indecent assault, giving numerous references to the literature.

Zilboorg(12) traces the historical aspects of applications of psychoanalysis to forensic psychiatry and pays tribute to Alexander and Staub and to William A. White for their pioneer work in this field. Haines(13) discusses the work of the Cook County Criminal Court Behavior Clinic and stresses the difficulties experienced by psychiatrists in testifying under the M'Naghten rules. A good presentation to laymen of the rationale of clinical psychological testing is presented by Blumenkrantz(14), who is careful to translate in lay and legal language each technical term as it is introduced. He further suggests that qualified professional psychologists should be accepted as expert witnesses on diagnostic problems involving brain damage. Davidson(15) and Stearns(16) discuss the psychiatrist and the court, the former emphasizing the psychiatric study and report, and the latter describing some personal qualifications of the testifying medical witness. Anton(17) presents a consideration of the forensic aspects of latent epilepsy, stressing the importance of EEG examinations in cases showing disturbances of consciousness.

The problem of the "sexual psychopath" continues to preoccupy all those who come into contact with it. Johnson and Robinson(18) describe clearly their views on the causes, treatment and prevention of this disorder. A review of the Nebraska Sexual Psychopath Statute(19) by D. Caporale and D. F. Hamann criticizes the lack of effective treatment programs for these offenders. Rapaport and Lieberman(20) review the California definition of a sexual psychopath and in another article with Siegel, Lieberman describes the program for sexual psychopaths at the Mendocino State Hospital: there, emphasis is placed on group psychotherapy with occupational and recreational therapy as adjuncts. Preliminary studies by Lieberman and Siegel appear to indicate a low percentage of recidivism(21). E. F. Hammer and Bernard Glueck, Jr.(22) discuss psychodynamic factors in sex offenders

¹ St. Elizabeths Hosp., Wash., D. C.

² VA Hosp., West Haven, Conn.

and offer a four-factor theory. In another article(23) Glueck discusses the dynamics and the etiology of the personality of the homosexual offender and offers some comments on the validity of some of the present day statutes. Gibbens(24) presents a statistical study of the sexual development and history of 200 Borstal lads. Of significant interest is the Wolfenden Report of September 1957, a well written and tightly reasoned report on the subjects of homosexual offenses and prostitution in England. Several specific recommendations are made for changes in the Criminal Code, for example, that homosexual behavior between consenting adults in private be no longer a criminal offense(25). Golding(26) states that narcoanalysis is generally accepted by courts in "insanity" cases and that the long-term use of this technique in any one case is preferable to only one or two interviews; narcoanalysis may be accepted by some courts in the area of credibility and character evidence. Burgee(27) in discussing chemical tests for alcoholic intoxication points out that the blood alcohol concentration alone is not an accurate determinant of intoxication; one must also consider the time in which the blood alcohol concentration was reached and the length of time it has been maintained. The problems of the courts in dealing with artificial insemination are discussed by Foster(28) and a recent symposium(29) discusses the medical and legal aspects of artificial insemination, as well as some psychological and psychiatric evaluations of the concept.

A recent symposium on juvenile delinquency(30) features a section by Adelaide Johnson, who particularly calls attention to the causation of juvenile delinquency, commenting on the unconscious initiation and fostering of antisocial attitudes in the child by one or both parents. Melitta Schmeideberg contributes a note on delinquent acts seen as perversions and fetishes. She stresses the importance of first making contact with the patient and obtaining some stability in the therapeutic relationship, before analyzing the transference, especially in its negative aspects(31). Wertham(32) in his book *The Circle of Guilt* has studied intensively those aspects of juvenile delinquency which

were illustrated in the Santana Case in New York. The same author in an article on psychiatry and censorship(33) directs attention to the tremendous increase in mass media and its effect upon our children. He considers that this material has produced a new psychological situation in which not only sex but an endless *saturating* stream of violence, crime, brutality, torture and sadism is poured upon the child. He emphasizes that the child must be protected from such stimuli, but that freedom in these media should still be maintained. He adds wryly that obvious pornography is a matter which does not need the psychiatrist for its handling.

In an article of international scope, Lopez-Rey(34) describes the first UN Congress on the prevention of crime and the treatment of offenders. The four main topics of discussion at this meeting, held in Switzerland in 1955, were Standard Minimal Rules for the Treatment of Prisoners, Selection and Training of Personnel, Open Institutions, and Prison Labor. Prevention of juvenile delinquency was also discussed. In another article Hunt and Forstenzer(35) write of the New York State Community Mental Health Services Act, its birth and early development. They discuss the origins and principles of an "attempt" to establish a comprehensive community mental health program for an entire state. This same program in its more functional and operational aspects is described by Lemkau(36) who stresses the fact of official and legal recognition that mental health is a public health problem, and a community-wide responsibility. Wittson and Dörner(37) describe the training and research facilities of the Nebraska Psychiatric Institute and the interesting program at the Federal Youth Correction Center at Ashland, Kentucky, is described by Galvin(38).

Overholser(39) writes to law students of the problems confronting psychiatry and the law, and elsewhere(40) reviews progress in forensic psychiatry. Two recent books are somewhat in contrast: Reinhardt in "Sex Perversions and Sex Crimes," a monograph in the Police Science Series, presents his material in a rather sensational fashion(41) whereas in the book *Sex Offenses*, a report of the Cambridge (England) Department

of Criminal Science, a very scholarly study of sex offenders is found, including a review of the existing codes(42). A classic text in forensic psychiatry has been revised and updated and we welcome the appearance of a new edition of *The Criminal, The Judge, and The Public* by Alexander and Staub (43). Two modest but interesting journals have made their appearance this year. The Association for the Psychiatric Treatment of Offenders, Incorporated, APTO Journal(44) (9 East 97th Street, New York), published its first issue in February of 1957, with articles by Schmideberg and others, while the *Mental Health Court Digest*(45) (1860 Broadway, New York 23, N. Y.) began publication in July.

Many laws were passed by the legislatures of the various states in the past year. The State of Maine(46) passed an act creating an Interstate Compact; Iowa(47) has established a mental health research fund of \$75,000.00. Brown(48) urges revision of West Virginia's severe habitual criminal law. Florida passed an act(49) providing for the commitment to the State Hospital of children between the ages of 12 and 15. The State of Tennessee(50) has appointed a committee "to ascertain, study and analyze all facts and report whether any conflict or overlapping has been occurring between the practice of medicine and surgery and the practice of psychology to the detriment of persons suffering from physical and mental ailments." Changes in terminology and definition continue to occur, and Connecticut recently defined a mentally ill person as a "person afflicted by mental disease to such an extent that he requires care and treatment for his own welfare, or the welfare of others, or of the community"(51). The Royal Commission on the Law Relating to Mental Illness and Mental Deficiency recommended that the term "person of unsound mind" no longer be used; the term "mental illness" was offered as the recommended substitute(52). The State of South Dakota(53) went one step further and passed an act providing that the words "insane" and "insanity" shall be eliminated from Titles 13 and 30 of the South Dakota Code, and the words "mentally ill" and "mental illness" substituted. Again in reference to the Royal

Commission's recommendations(52) it was suggested that every effort be made to persuade patients and their relatives to agree to hospital care without compulsion and that liberalization and relaxation of the former very strict procedures for commitment were desirable goals.

BIBLIOGRAPHY

1. New York: The William Alanson White Institute of Psychiatry, Psychoanalysis and Psychology, 1956.
2. Am. J. Psychiat., 113: 577, Jan. 1957.
3. Rocky Mt. L. Rev., 29: 250, Feb. 1957.
4. Md. L. Rev., 17: 178, Spring 1957.
5. Conn. Bar J., 31: 24, March 1957.
6. L. Q. Rev., 73: 12, Jan. 1957.
7. Brooklyn L. Rev., 13: 1, Dec. 1956.
8. Mass. L. Q., 41: 30, Dec. 1956.
9. Harvard L. Rev., 70: 1465, June 1957.
10. Jurist, 16: 267, July 1956.
11. Z. Diagn. Psychol. Persönlforsch., 4: 24, 1956.
12. Internat. J. Psychoanal., 37: 318, July-Oct. 1956.
13. J. For. Sci., 2: 59, Jan. 1957.
14. Med. Tr. T. Q., 3: 41, March 1957.
15. Correction, 22: 10, May-June 1957.
16. Fed. Prob., 20: 26, Dec. 1956.
17. Deutsche Gesundheitswes. Zschr. f. Med., 10: 1504, Nov. 17, 1955.
18. J.A.M.A., 164: 1559, Aug. 3, 1957.
19. Neb. L. Rev., 36: 320, March 1957.
20. Calif. Med., 85: 232, Oct. 1956.
21. Am. J. Psychiat., 113: 801, March 1957.
22. Psychiat. Quart., 31: 325, April 1957.
23. Minn. L. Rev., 41: 187, Jan. 1957.
24. J. Ment. Sc., 103: 527, July 1957.
25. Report of the Committee on Homosexual Offenses and Prostitution. London: Her Majesty's Stationery Office, 1957.
26. No. Carolina L. Rev., 35: 515, June 1957.
27. Md. L. Rev., 17: 193, Summer 1957.
28. Wayne L. Rev., 3: 35, Winter 1956.
29. U. Detroit L. J., 34: 473, March 1957.
30. Pediatrics, 17: 930, 1956.
31. Internat. J. Psychoanal., 37: 422, July-Oct. 1956.
32. New York: Rinehart, 1957.
33. Am. J. Psychother., 11: 249, April 1957.
34. J. Crim. L., 47: 526, Jan.-Feb. 1957.
35. Am. J. Psychiat., 113: 680, Feb. 1957.
36. Am. J. Psychiat., 113: 686, Feb. 1957.
37. State Govt., 30: 134, June 1957.
38. Fed. Prob., 20: 28, Dec. 1956.
39. Student Lawyer, J., 2: 7, Dec. 1956.
40. Ch. 25 in Progress in Neurology and Psychiatry, An Annual Review, Vol. 12, edited by E. A. Spiegel. New York: Grune & Stratton, 1957.
41. Springfield, Ill.: Charles C Thomas, 1957.
42. London: Macmillan; New York: St. Martin's Press, 1957.
43. Glencoe, Ill.: Free Press, 1957.

44. APTO, ed. by Melitta Schmideberg and Jack S. L. J.
45. Mental Health Court Digest, ed. by Emanuel Bund.
46. Session Laws 1957. Ch. 231.
47. Session Laws 1957. Ch. 111.

48. W. Va. L. Rev., 59: 30, Dec. 1956.
49. Session Laws 1957. Ch. 57-836.
50. Session Laws 1957. S. Res. 8.
51. Public Act No. 408.
52. Her Majesty's Stationery Office, 1957.
53. Session Laws 1957. Ch. 151.

ADMINISTRATIVE PSYCHIATRY

J. MARTIN MYERS, M.D.,¹ AND LAUREN H. SMITH, M.D.²

The preoccupation of American psychiatrists with social environment has been pointed out by Whitehorn(1). This special emphasis on improving the social milieu of the mental hospital ward and making better use of the personnel for basic therapeutic purposes has been of vital concern to administrative psychiatrists. From the social environmental viewpoint Sivadon describes three things the psychiatric hospital ought to be able to do: first, offer the new patient living conditions suited to his present level of functioning; secondly, obtain those circumstances which permit him to establish satisfactory relationships with his physical and social environment; and thirdly, furnish opportunity for and means of developing toward social behavior more and more approximating the normal(2).

In a sociological study of the organization and relationship of personnel and patients in a large state hospital, Belknap finds that the hospital has two essentially unrelated functions, the one of treating the mentally ill and the other of serving as a "more efficient poor farm." He recommends the large hospitals be abandoned for small ones integrated into the community and that the ward attendant be a college graduate with special training (3). In another large 2400 bed hospital it was found that the time spent by the professional personnel with an individual patient averaged from 11 to 39 minutes per week and with a group of patients from 2.8 to 7.1 hours per week(4). A pattern of intergroup communication with poor exchange of information left the physician more or less an outsider, according to Mishler and Trapp(5).

Four types of institutional structure are described by Henry, and two—the simple

undifferentiated and multiple differentiated—are compared in regard to the patient, physical plant, task performed, worker personality, and director(6). The role of the administrator in an institution where aggressive boys are treated is delineated by Bloch and Selber(7).

The measurement of critical attitudes toward the hospital held by various groups in the hospital and community are reported from the Norfolk (Nebraska) State Hospital(8).

The open door policy of British psychiatric hospitals is having continuing impact in this country. A group of six New York state hospital directors report fully on their overall observations during a month's visit to British hospitals in the September issue of *Mental Hospitals*(9); while a more detailed description of five of the hospitals (Belmont, Warlingham Park, Champion House, Casel, and Marlborough Day Hospital) is made by Briggs and Stearns(10). The Rapaports studied the handling of authority at Maxwell Jones' Social Rehabilitation Unit of the Belmont Hospital(11). The unlocking of doors created few problems with the paranoid or manic patient and most with the deteriorated schizophrenic, but Hurst wonders if some of the problems of the latter group may not have been caused by the removal of contact with the outer world in the first place(12). Other reports on the experiences of opening psychiatric wards are by Wilmer at the Oakland Naval Hospital(13), MacDonald and Daniels at the Colorado Psychopathic Hospital(14), Rundle and Briggs at a naval hospital(15), and Still at a mental hospital in Barbados(16). The factors involved in the establishment of a therapeutic community which utilizes milieu therapy or the "conscious use of aspects of the patients' environment for treatment" are physical

¹ 4401 Market St., Philadelphia, Pa.

² 111 North 49th St., Philadelphia, Pa.

amenities, "emotional climate," specific attitudes toward the nature of the psychiatric disorder and its treatment, modes of behavior in specific recurring situations, and formal social organization amongst staff members, according to Koltes and Jones (17).

Kalinowsky reported on the basis of numerous visits to psychiatric facilities abroad that the admission and discharge rates are extremely high there, in part at least because of different public attitudes toward the mentally ill(18). Although Kalinowsky noted no shortage of well trained psychiatrists in the British hospitals, a recent appeal by Strauss points out that increasing public acceptance of the mental hospital (and its large outpatient department) has increased the demand for staff(19). In Scotland the number of admissions per thousand population has more than doubled since 1942 without any increase in bed capacity, according to Rodger(20). In a report from Norway, Odegard describes hospital psychiatry there and mentions the need for more beds(21).

In Holland's psychiatric hospitals fewer security measures with more open courts and gardens were found by Lebensohn(22). Gutteresen noted that the buildings there are smaller with patients housed in smaller groups(23).

Designing a psychiatric ward to emphasize "sociopetality which encourages, fosters, or even enforces the development of stable interpersonal relationships such as found in small face to face groups" is described by Osmond(24) and executed architecturally in the Saskatchewan Plan for small regional hospitals with buildings holding 32 patients, by Izumi(25).

The tremendous growth of psychiatric facilities in general hospitals is statistically reviewed by Bush(26); while a book published by Bennett and coworkers gives much valuable practical information about the practice of psychiatry in general hospitals with an emphasis on the administrative aspects(27). From Montreal is reported the functioning of a Night Treatment Unit(28) and Well-Being Clinic(29). The latter functions as a screening center, finding potential psychiatric patients in the community. The development and operation of the New York State Com-

munity Mental Health Services Act are described by Hunt(30) and Lemkau(31).

Out of 1,281 patients admitted to the Netherne Hospital in England in 1949, 61 still in hospital 5 years later were studied carefully and a recommendation for more After-Care Houses or hostels made(32). A study of the chronic hospital patient was made at Warren (Pa.) State Hospital(33). Malzburg has continued his valuable cohort studies from the New York state system with reports on alcoholic psychoses and psychoses with cerebral arteriosclerosis(34) and senile psychoses and involutional psychoses(35). Senile patients have been furloughed to private nursing homes in Texas(36) and sent to a new state-run nursing home type of facility in Massachusetts(37).

The chairman, sub-committee on education and training, Committee on Certification of Mental Hospital Administrators, emphasizes the growing need for special training by those who work in psychiatric administrative positions, states the salient points in good mental hospital administration, and describes several of the training courses established to provide this training(38). Ewalt has written a small book which covers many aspects of psychiatric administration(39), and the series on mental hospital administration appearing in *Mental Hospitals*, March 1956, to June 1957, has been published in book form(40). Good management principles and skills which are of vital use to the administrative psychiatrists are sketched out by Duval(41).

BIBLIOGRAPHY

1. Whitehorn, J. C.: *Am. J. Psychiat*, 114: 109, Aug. 1957.
2. Sivadon, P. D.: *Psychiat*, 20: 205, Aug. 1957.
3. Belknap, I.: *Human Problems of a State Mental Hospital*, New York: McGraw Hill Co., 1956.
4. Cusick, J. L., Jr.: *Psychiat*, 20: 309, Aug. 1957.
5. Mishler, E. G., and Trapp, A.: *Human Relations*, 9: 187, 1956.
6. Henry, J.: *Psychiat*, 20: 47, Feb. 1947.
7. Bloch, P. H., and Selber, E.: *Am. J. Orthopsychiat*, 27: 69, Jan. 1957.
8. Klopfer, W. G., Wylie, A. A., and Hillson, J. S.: *J. Clinical Psych*, 12: 361, Oct. 1956.
9. Hoch, P. H., Hunt, R. C., Snow, H. B., Pleasure, H., O'Neill, F. J., Terrence, C. F., and Beckenstein, N.: *Mental Hosp*, 8: 5, Sept. 1957.

10. Briggs, D. L., and Stearns, L.: U. S. Armed Forces Med. J., 8: 184, Feb. 1957.
11. Rapaport, R. N., and Rapaport, R. S.: Behavioral Science, 2: 128, April 1957.
12. Hurst, L. C.: Am. J. Psychiat., 114: 306, Oct. 1957.
13. Wilner, H. A.: Mental Hygiene, 41: 163, Apr. 1957.
14. MacDonald, J. M., and Daniels, J. L.: J. of N. & M. Dis., 124: 148, Aug. 1956.
15. Rundle, F. L., and Briggs, D. L.: U. S. Armed Forces Med. J., 8: 1339, Sept. 1957.
16. Still, R. M. L.: World Mental Health, 9: 63, May 1957.
17. Koltes, J. A., and Jones, M.: Mental Hosp., 8: 16, March 1957 (Part I), 8: 6, April, 1957 (Part II).
18. Kalinowsky, L. B.: Am. J. Psychiat., 113: 549, Dec. 1956.
19. Strauss, E. B., et al.: Lancet, 272: 930, May 1957.
20. Rodger, T. F.: Am. J. Psychiat., 114: 97, Aug. 1957.
21. Odegard, O.: Mental Hosp., 8: 12, March 1957.
22. Lebensohn, Z. M.: Mental Hosp., 7: 22, Oct. 1956.
23. Gutttersen, A. G.: Mental Hosp., 7: 27, Oct. 1956.
24. Osmond, H.: Ment. Hosp., 8: 23, Apr. 1957.
25. Izumi, K.: Ment. Hosp., 8: 30, Apr. 1957.
26. Bush, C. K.: Am. J. Psychiat., 113: 1059, June 1957.
27. Bennett, A. E., Hargrove, E. A., and Emsle, B.: The Practice of Psychiatry in General Hospitals. Berkeley: Univ. of Calif. Press, 1956.
28. Moll, A. E.: Am. J. Psychiat., 113: 722, Feb. 1957.
29. MacLeod, A. W., Silverman, B., and Poland, P.: Am. J. Psychiat., 113: 795, Mar. 1957.
30. Hunt, R. C., and Farstinger, H. M.: Am. J. Psychiat., 113: 680, Feb. 1957.
31. Lenkau, P. V., Furman, S. S., Farbman, R., Lay, M., and Bailey, M.: Am. J. Psychiat., 113: 686, Feb. 1957.
32. Baker, A. A., Thorpe, J. G., and Jenkins, V.: British J. Med. Psych., 30: 113, 1957.
33. Morgan, N. C. and Johnson, N. A.: Am. J. Psychiat., 113: 824, Mar. 1957.
34. Malzberg, B.: Ment. Hygiene, 41: 110, Jan. 1957.
35. Malzberg, B.: Ment. Hygiene, 41: 250, Apr. 1957.
36. Hoerster, S. A., Jr.: Ment. Hosp., 8: 23, Mar. 1957.
37. Shea, J. T., and Whipple, G.: Ment. Hosp., 7: 11, Dec. 1956.
38. Terhune, W. B.: Am. J. Psychiat., 114: 64, July 1957.
39. Ewalt, J. R.: Mental Health Administration. Springfield, Ill.: Charles C Thomas, 1956.
40. Blain, D.: Current Practices in Mental Hospital Administration. Washington: Am. Psychiat. Ass'n Ment. Hosp. Service, Sept. 1957.
41. Duval, A. M.: Ment. Hosp., 8: 5, Oct. 1957.

MILITARY PSYCHIATRY

JOSEPH S. SKOBBA M.D.¹

Major interest has centered in evaluation of treatment programs, testing and selection procedures, and the operation of therapeutic communities in military hospitals.

Three references to articles on military psychiatry in foreign journals were found in the current List of Medical Literature of the National Library of Medicine. The subjects were: "Psychiatry and the Military Examination" (1); "Development of Military Psychiatry in England" (2); and "Problems and Status of Psychiatric Service in the Modern Army" (3).

An appraisal of five years of preventative psychiatric effort in the Army was made by Drs. Allerton and Peterson (4). They found a declining psychiatric incidence rate due to disabling psychiatric illness which they attribute to the operation of the Mental Hy-

giene Consultation Service program. They point out that the importance of outpatient psychiatric treatment was recognized during World Wars I and II and in the Korean conflict, but that the program was difficult to maintain in past periods of peace. They urge that every effort be made to insure the continuance of the program.

Glass and Ryan (5) and associates, using 505 basic trainees as a sampling, studied the relationship between certain factors such as early environment, pre-service adjustment, psychopathology, intelligence, interview behavior, and the individuality of the psychiatrist in the prediction of military performance as compared with subsequent actual performance. They found that the background data only mildly related to the level of performance. Past performance was more significantly related, but a majority of those

¹ 478-490 Peachtree St., Atlanta 8, Ga.

with poor past performance rendered satisfactory service. There was little relationship between potential neuroses or behavior disorders and effective service. Limited intelligence did not preclude satisfactory military service. Favorable impressions during interviews which differed from the content were substantiated by later effective performance. Variations in the predictions of different psychiatrists were found to be due to matters of personality, training and experience.

Briskin and Stennis(6) became aware of the discrepancy between diagnostic statements from the MMPI and the final diagnosis determined by joint staff efforts. The profiles consistently indicated that the patients were far sicker than they appeared either clinically or by other psychologic instruments. This discrepancy appeared to be the result of a difference between the population at this army post and the population on which the test was standardized. They describe a method by which local norms were established. Following the establishment of these norms, two judges using the revalidated tests were able to predict with significant accuracy the final psychiatric diagnosis. When these same judges attempted to predict the final diagnosis using the standard MMPI profiles, efforts were on a purely chance basis. They maintain that the predictability of the MMPI can be improved if the test is specifically revalidated for the particular population with which it is being used.

Canter and Canter(7) studied the effectiveness of adjustment to structured military situations by various types of individuals. They used three test groups: delinquent group, psychiatric patient group, and the adjusted group. The purpose was to determine the possible relationship between authoritarian attitudes and adjustment to the military situation. The California F Scale scores were obtained on delinquent soldiers, psychiatric patients and a group of adequately functioning soldiers. Mean scores were significant for all groups. The patient group scored the highest, the delinquent group the lowest, and the adjusted group in between. These results are discussed in relationship of attitudes of compliance and acquiescence to such adjustments. It is their idea that this might suggest a possible line of investigation

for military selection. There is some question as to whether the authoritarian attitude was present in the various individuals before entry into the service or developed afterward, or whether the authoritarian attitude was due to more basic and unidentified personality factors, which do not appear until military experience mobilizes a particular form of adjustment.

Domanski(8) reports on the study of eosinopenia as a means of providing qualitative evidence of the presence of any emotional stress response in otherwise healthy individuals. The eosinophil count has been used to provide information concerning differences in response to a given stress and the relative severity of the particular in-flight stress or stress complex.

Phillips(9) contends that many of the manifestations of anxiety are such as to increase the real hazards of flying. No screening methods have been developed which eliminate those who may fail under conditions of stress occurring in flight training. Until such time as improved psychologic devices to determine the student's tendencies to anxiety and reveal his ability to utilize defenses against anxiety which are not in themselves hazardous become available, he believes only close contact with instructors and students can identify the candidates whose systems make them poor risks for aviation careers.

Balke, Wells and Clark(10) investigated the possibility that hyperventilation might be a possible factor contributing to accidents otherwise not explainable at the time. An experiment was devised by which it was shown that progressive hypocapnia caused by hyperventilation gradually impaired psychomotor performance. Sampling in flight done in three phases of jet aircraft training verified the existence of in-flight hyperventilation. It was their conclusion that instances of in-flight hyperventilation become more frequent with increased capabilities of high performance aircraft flown.

Since psychiatric patients often present management problems in flight, and if they become assaultive are a potential source of danger to other occupants of aircraft, the flight nurse frequently wonders whether certain patients should be resedated and at what

stage. A study(11) was made by sedating alternate patients with amobarbital sodium 0.4 gm. by mouth and phenobarbital sodium 0.3 gm. in glycerin intravenously. Of 1,219 questionnaires sent out, complete medical records were returned on 625. Of these, 329 pertained to patients who received amobarbital and 296 of those who received phenobarbital. The duration of flight for 460 patients was 8 to 12 hours, for 152 it was 4 to 6 hours, and for 14 about 2 hours. They found that there was statistically no significant difference between the sedative effect of the two medications. In the two combined groups only 2.6 posed serious management problems and only 1% were assaultive or suicidal. The percentage of patients presenting serious nursing problems increased with duration of the flight. They recommended that resedation should be seriously considered on any long flight for a patient with a history of assaultiveness. This should be administered three to four hours after the initial medication was given and in the instance of well hydrated patients the dosage may be repeated in 2½ hours. Caution is necessary where dehydrated patients are involved since the observable effect may be delayed and therefore overwhelming in degree.

Rundle and Briggs(12) describe the organization of a therapeutic community and some of the many problems encountered in the initial phases.

Briggs and Stearns(13) describe their observations in 5 selected English hospitals in which therapeutic communities were operating. They describe the methods of operation in each one of the institutions. They were impressed by the success of treatment in a relatively short time of four to six months for chronic character and behavior disorders. It was their impression that this resulted from the fact that each patient has in a sense many therapists and he, too, becomes a therapist. They quote Dr. Maxwell Jones as stating that "the important fact is that the patient is living in a milieu which is consistently therapeutic and treatment is like being put in a pressure cooker to get the patient well done in a hurry."

Stearns(14) describes the operation of a therapeutic community from the nursing standpoint. She emphasizes the fact that the

objective is to work with the patient rather than providing for the patient. In this situation the nurse gives up the strictly authoritarian role and works along with the patients and other staff members providing a therapeutic community atmosphere. Greater recognition is given each patient's need to become a member of the ward community.

Rundle and Briggs(15) in their operation of a therapeutic community in a hospital found the principal problems encountered were those related to the necessity of dealing by means of legal action with individuals who committed asocial or antisocial acts in order that the welfare of the community might be preserved. For the most part these matters were handled successfully in the group. Passive dependent attitudes of the members were treated as resistance to treatment. The participation of the staff committee still remains unsettled. Some of the staff felt insecure in the relaxation of the former controls and were only slowly able to adapt to their new roles.

BIBLIOGRAPHY

1. Lingbeek, M. S.: *Nederlands Militair Geneeskundig Tijdschrift*, May 1957.
2. Tidskrift, L.: *Militär Hälsovård*, 81:2, 1956. Pp. 104-7.
3. Kandic, B.: *Vojno Sanite tsi Pregled*. Beograd, Servia., 263-265 and 375-7.
4. Allerton, William S., and Peterson, Donald B.: *Am. J. Psych.*, 113:788, Mar. 1957.
5. Glass, Albert J., and Ryan, Francis J.: *U.S. Armed Forces M. J.*, 18:346, Mar. 1957.
6. Briskin, Gerald J., and Stennis, James W.: *U.S. Armed Forces M. J.*, 8:539, Apr. 1957.
7. Canter, Francis M., and Canter, Anne C.: *U.S. Armed Forces M. J.*, 8:1201, Aug. 1957.
8. Domanski, D. S. J.: *J. Aviation Med.*, 28:249.
9. Phillips, B.: *J. Aviation Med.*, 28:364, Aug. 1957.
10. Balke, Bruno, Wells, J. Gordon, and Clark, Robert T. Jr.: *J. Aviation Med.*, 28:241, June 1957.
11. Franklin, H., et al.: *U.S. Armed Forces M. J.*, 8:704, May 1957.
12. Rundle, Frank L., and Briggs, Dennie L.: *U.S. Armed Forces M. J.*, 8:811, Jun. 1957.
13. Briggs, Dennie L., and Stearns, Lina: *U.S. Armed Forces M. J.*, 8:184.
14. Stearns, Lina: *Mil. Med.*, 121:121, Aug. 1957.
15. Rundle, Frank L., and Briggs, Dennie L.: *U.S. Armed Forces M. J.*, 8:1339, Sept. 1957.

PSYCHIATRIC EDUCATION

FRANKLIN G. EBAUGH, M.D.,¹ AND ROBERT H. BARNES, M.D.²

A review of progress in the field of psychiatric education during 1957 demonstrates the continued trend toward broad and dynamic planning and experimentation. Psychiatric educators continue to realize the need of contributing toward the training of workers in allied fields as well as within the medical profession. Bartemeier (1) underlines the need for cooperation of physicians in other fields and in overcoming "some of the strong feelings of opposition to the concepts and techniques of dynamic psychiatry." He emphasizes the need for psychiatrists to learn to communicate with their medical colleagues in a language that can be understood.

New work continues to appear in psychiatric and psychological test techniques in the selection of medical students. Harrower (2) wisely points out that psychological tests, including I.Q. and projective procedures, should rightfully be used to screen candidates into appropriate counseling channels and not out of a medical school berth. She points in particular to the inability of these tests to predict academic success or failure. One comprehensive review of the different "predictor variables employed in research in the selection of medical students" appeared (3). It points out that the medical school success criterion against which selection techniques have been evaluated is grades alone. The limitations of this criterion are all too obvious. These authors believe, however, that psychological tests, particularly in combination, do a "more efficient job of predicting medical school success than is generally supposed." They are particularly interested in the Rorschach, individual and group, and the M.M.P.I. A Canadian study of success in nurses' training has indicated the value of certain Wechsler-Bellevue and Rorschach indices (4).

The tremendous difficulties in picking who is going to become a "good doctor" are dramatically illustrated in a recent survey of 88 general practitioners made by researchers from the University of North Carolina in a study sponsored by the Rockefeller Founda-

tion (5). Setting up certain criteria for rating a doctor's clinical skill, the researchers compared these ratings with his medical school admissions records, the Medical Aptitude Test scores, medical school grades, length and quality of post-medical school training, and many other supposedly pertinent factors. There was a discouraging lack of correlation between any of these factors and their ratings of the doctor's capabilities in practice. The researchers believe that this can only be explained in terms of "the individual's interest in medicine." Numerous strong motivating factors behind such an interest seem paramount in any selection process and yet these are tremendously difficult to estimate by the techniques of psychiatric interviewing or projective testing.

Undergraduate Medical Education.—Again the literature is filled with new studies on closer integration of psychiatric concepts with the general medical curriculum, but it is difficult to ascertain the extent to which this has been effective. At least one prominent authority has not been much impressed by the progress (6). "Country-wide there are all too few schools making any real attempt at a multi-disciplinary approach to the problem of illness. Real integration between psychiatry and such departments as surgery, obstetrics, and pathology is minimal." One of the most sensible leads is reported from Beth Israel Hospital in Boston where a 1½-hour per week, 10-week course has been set up in various aspects of personality development and dynamic psychiatry for the surgeons and internists responsible for teaching physical diagnosis to second-year medical students at Harvard Medical School (7). A preliminary evaluation of results suggests that instructors are more likely to introduce personality factors into their teaching, and that they seem more aware of the student's feelings, particularly in his first contact with a patient and concerning his low position in the hospital hierarchy. A combined effort of the departments of pediatrics, obstetrics, preventive medicine and psychiatry at Boston University, in the area of early growth and development, seems significant (8). Fourth-

¹ 1801 High Street, Denver, Colo.² Kansas City, Mo.

year students spend part of a 4-month period on the "ecology ward." Each student is assigned a patient from the prenatal clinic, is present at the delivery and then follows the mother, child and family during this early developmental period. Integrated teaching is focused around this experience. At the University of North Carolina an attempt is being made to integrate psychiatric and basic science teaching, stressing also the importance of psychological and social factors. This plan has facilitated communication between the departments of psychiatry and biochemistry, physiology and pharmacology (9).

Two interesting reports on stimulating research interests in medical students have appeared. Bayles and Goldstone (10) report on the use of a library or laboratory research project in psychiatry as part of an elective during the freshman year. A similar device has been used at Western Reserve University (11). The importance of such efforts in attracting future medical scientists with a research bent in psychiatry seems important.

Mathews and Watkins (12) report on the "Resistances Encountered in Teaching Psychiatry in the Freshman and Sophomore Years." They list the following points: 1. Lack of preparation of the pre-medical student for medical psychiatry. Classic undergraduate courses in psychology may actually lead to the student rejecting medically structured psychological teaching. 2. Lack of identification with a psychiatrist prior to coming to medical school. Identification, if any, is usually with a general practitioner, internist or surgeon. 3. Heavy weighting of the pre-medical curriculum toward the physical sciences. 4. The subject-matter presented in the first two years of medical school may engender anxiety in the student, before he can conquer this anxiety by actually working with patients and their families. Often presenting material without patients leads to anxiety and resistance. Houston and Allen (13) suggest assigning to each 2nd year student a psychiatric outpatient with whom he works in weekly sessions. This procedure during the sophomore year helps to counteract some of the resistances mentioned by Mathews and Watkins. At the University of Pennsylvania Medical School fourth-year students meet one hour per week for 18

weeks in groups of 10 along with 3 or 4 faculty members. The object is better understanding of themselves through experiencing and examining their reactions to one another and to the group leaders (14). The teaching experience at Temple University suggests that "indoctrination of medical students to general psychiatric concepts could probably be done more effectively and meet with less resistance if the teaching is first oriented around the child, his emotional development and difficulties rather than teaching with an adult psychiatry orientation" (15).

In an experiment at Duke University (16) the psychiatric social worker, in working with fourth-year medical students in an O.P.D., seems to be able to help the students express their feelings, often hostile and anxious, concerning psychiatry and the psychiatric approach in general. Often this can be more easily discussed with the social worker than with the psychiatrist, and may aid the students to work through some of their resistances to psychiatry. The other report indicates the usefulness of clinical psychologists in broadening the psychiatric education of the general physician. During 1955, 346 psychologists were known to hold appointments on medical school staffs in the United States (17).

Criticism of our present system of internships continues. It ranges from the advocacy of complete abolition to suggestions that the internship become part of the fourth year of medical school. Less extreme proposals suggest that all rotating or, on the other hand, all straight internships be abolished, or that internships be abolished in teaching hospitals. However, a recent statement of the Association of American Medical Colleges opposes any attempt to regiment the form of the internship. This statement points out the primacy of the needs of the individual graduates, as well as of the individual hospitals, in determining the type and form of internship offered (18).

Residency Training.—There were 2,166 psychiatric residents in training for the year 1956-1957 as compared with 1,950 for the preceding year. This represents 73% of residencies in psychiatry filled (19). Only 26.5% of state hospital centers offered 3-year training, compared with 81.5% of university-affili-

ated centers (20). One-third of all residents were in state hospital training, and made up almost one-fourth of all state hospital physicians. Foreign trained physicians comprised the majority of all residents in state hospitals (33.5% of all psychiatric residents in training). This proportion of foreign trained physicians in psychiatric residency is not markedly out of line with their number in residency training in other specialties (20). During the year there was an increase of 12% in the number of foreign medical school graduates training in all specialties in the United States (19). The shortage of graduates of American medical schools who seem willing to go into psychiatry continues. This is certainly one of the reasons for the large number of foreign residents in our psychiatric training programs. In many ways these students have enriched our training institutions and have brought new ideas to American students and teachers. They have also brought certain problems, a careful evaluation of which is very much needed. We also need to evaluate how well we may be meeting the foreign resident's needs in preparing him for the practice of psychiatry in his own country.

In a recent study completed by the National Opinion Research Center of the University of Chicago (21) for the Surgeon General's office, 1,114 students in 44 medical schools were queried, "If you were to specialize in your practice, what field of specialization do you think you would prefer most?" Results were as follows: 30%, internal medicine, 22%, surgery, 10%, pediatrics, 10%, obstetrics and gynecology, and 8% psychiatry and/or neurology. There are some interesting suggestions that if we were to train more women physicians we might expect a higher proportion of medical school graduates going into psychiatry. A survey of women physicians graduating from medical school between 1925 and 1940 indicates that 13.6% specialized in psychiatry or psychiatry and neurology. Among specialties for women our field was second only to pediatrics (17.5%) (22). A control group of men graduating during the same period indicated only 3.4% were in psychiatry or combined psychiatry and neurology. Thus during this period about four times as many women as

men had gone into the mental health field.

Potter, Klein and Goodenough (23) report on the "Problems Related to the Personal Costs of Psychiatric and Psychoanalytic Training." They note the extent to which prolonged and costly analytic training cuts down the mobility of the trainee following completion of his work, and adversely affects his interest in public service and in academic work. They note, too, an almost inevitable "bias in the direction of the profit motive rather than service." Suggestions toward remedying this situation include: greater integration of training in psychiatry and psychoanalysis, student loans and career grants, control of fees for personal analysis, use of supervised private practice to allay some of the costs while the trainee is still in residency, and an assumption of the major costs of analytic training by the medical college or hospital. It is clear that certain of these suggestions would present major problems. It is significant that 60% of psychiatric residents are currently in training within commuting distance of psychoanalytic training institutions (20). This may explain some of the problems involved in interesting energetic young psychiatric graduates to migrate to the psychiatric hinterlands, removed from the large centers.

The program of graduate psychiatric training in Canada is ably reviewed by Jones (24). Much of the development there has been similar to that in the United States, although almost all programs are under university approval and aegis. There are approximately 150 approved residencies in Canada, and candidates are reasonably well supported stipend wise. Certification by the Royal College of Physicians and Surgeons of Canada requires, as a prerequisite, a rotating internship, and 4 years of postgraduate training.

An encouraging trend is the support being given toward training for careers in the experimental aspects of psychiatry. The United States Public Health Service is continuing its new program of Career Investigator Grants (25), which includes budgeting for tuition costs for further specialized training. The Mental Health Research Institute in Ann Arbor (26) is attempting to improve the teaching of residents in research areas, as are many of the other more progressive resi-

dency training programs. The Ford Foundation recently granted over three-and-a-half million dollars to the Foundation's Fund for research in psychiatry to develop a program for training research personnel in the mental health field during the next 5 years(27). These developments augur well for the future of our field.

BIBLIOGRAPHY

1. Bartemeier, L.: J.A.M.A., 163:95, 1957.
2. Harrower, M.: Brit. J. Med. Psychol., 30: 19, 1957.
3. Gottheil, E., and Michael, C.: J. Med. Ed., 32: 131, 1957.
4. Mindess, H.: J. Projective Tech., 21:37, 1957.
5. Hoffman, L.: Med. Economics, pp. 124, June 1957.
6. Felix, R.: Am. J. Psychiat., 113:673, 1957.
7. Dwyer, T., and Zinberg, N.: J. Med. Ed., 32:331, 1957.
8. Bakst, H., and Malamud, W.: J. Med. Ed., 32:603, 1957.
9. Hawkins, D., *et al.*: "An Integrated Teaching Program Between the Department of Psychiatry and the Basic Services," Read, Annual Meeting, Am. Psychiatric Assoc., Chicago, 1957.
10. Bayles, S., and Goldstone, S.: "Freshman Research Seminars: An Experiment in Elective Psychiatry," Read, Annual Meeting, Am. Psychiatric Assoc., Chicago, 1957.
11. Harper, E., *et al.*: "The Integrated Teaching of Psychiatry in A Medical Curriculum," Read, Annual Meeting, Am. Psychiatric Assoc., Chicago, 1957.
12. Mathews, R., and Watkins, C.: J. Med. Ed., 32:37, 1957.
13. Houston, M., and Allen, D.: J. Med. Ed., 32:483, 1957.
14. Peltz, W., Steel, E., and Wright, S.: Am. J. Orthopsychiat., 27:145, 1957.
15. Char, W.: "Four Years of Experience in Teaching Child Psychiatry to Medical Students," Read, Annual Meeting, Am. Psychiatric Assoc., Chicago, 1957.
16. Goldsmith, J., and Hess, D.: J. Med. Ed., 32:263, 1957.
17. Matarazzo, J., and Daniel, R.: J. Med. Ed., 32:410, 1957.
18. Editorial: "Attempts to standardize the Form of the Internship," J. Med. Ed., 32:47, 1957.
19. "Graduate Medical Education in the U.S.," J.A.M.A., 165:459, 1957.
20. Fact Sheet #3, Joint Information Service, A.P.A. and N.A.M.H., August 1957.
21. Editorial: "Career Preferences of Medical Students in U.S.," J. Med. Ed., 32:231, 1957.
22. "Survey of Women Physicians Graduating from Medical School," J. Med. Ed., 32: No. 3, Part 2, 1957.
23. Potter, H., Klein, H., and Goodenough, D.: Am. J. Psychiat., 113:1013, 1957.
24. Jones, R.: Canad. Med. Assoc. J., 76:529, 1957.
25. Information Statement: "Research and Training Grants and Awards of the Public Health Service," Bethesda 14, Maryland, October 1956.
26. First Report: Mental Health Research Institute, University of Michigan, Ann Arbor, 1957.
27. Annual Report: The Ford Foundation, Oct. 1, 1955 to Sept. 30, 1956.

CLINICAL NOTES

THE PHRENOTROPIC ACTION OF RITALIN AS EVALUATED BY AN IBM RATING SCALE¹

VERONICA M. PENNINGTON¹

In the past 4 years many patients from the 4,500 bed Mississippi State Hospital have been returned to their homes following use of neuroleptic agents. Most of these patients have been of the hyperkinetic, noisy, active variety, leaving a residue of dull, inert, apathetic, confused and depressed patients to be treated by the ingenuity of the psychiatrist and the beneficial effects of analeptics. Since neuroleptic drugs frequently induce inertia and lassitude in some of these patients, contributing to their retarded mental and physical activity, we chose a psychoanaleptic methylphenidate hydrochloride, called Ritalin, for the present investigation.

Two hundred eighty-nine depressed, untidy, inert, negativistic or catatonic white female patients were selected without regard for age or diagnosis except for a special group chosen because of senile or arteriosclerotic symptoms. The aim was to find a phrenotropic agent that would put positive qualities into lethargic, negative-quality individuals constituting the majority of this patient group.

Variation of results obtained in drug trials from one worker to another has hindered the comparison of findings because of a difference in descriptive terms. The standardization of all findings in the use of pharmacotherapeutic agents is possible only if the evaluations are made by the same scale.

We, therefore, developed an IBM form for the evaluation of patients before and after treatment with psychopharmacotherapeutic drugs, to show the changes in every facet of patient thinking, doing and being. Synchronization of all findings from worker to worker and country to country can be accomplished with use of this IBM Rating Scale.

Three cards are used, history card, pre-

and post-medication card. The history card need be filled only once. The pre-medication card gives the patient's diagnosis, age, years hospitalized, mental condition before treatment, length of mental illness, menstruation, weight, blood pressure, rectal temperature, laboratory work, outstanding physical symptoms, previous reactions to drugs, supervision and self care, toilet habits, eating habits, sleep habits, restlessness, verbosity, retardation, aggressiveness, affectivity, needed supervision in work and recreation, delusions and type, hallucinations and type, orientation, confusion, relevance, coherence, psychological testing, previous pharmacotherapy with dosage and status of the person completing the form. The post-medication card contains the same information and can be completed weekly, monthly, or merely at the end of the drug trial. When the pre-card findings are subtracted from the post-card findings the improvement or worsening in all of those categories can be readily seen.

The method of study together with the dosage and manner of giving methylphenidate is described in full.

In this group of 289 women, 53% showed improvement in some form ranging from improved attention to personal hygiene to complete restoration to an active life of work and recreation. It must be remembered that credit for improvement is shared by the neuroleptic agent given in combination with the methylphenidate, but the methylphenidate is responsible for sparking the improvement. No shock therapy or psychosurgery has been used in the past 3 years. Required supervision in self-care was decreased 65% by the use of Ritalin. Toilet habits were improved 38%. Eating habits, including the necessity for feeding, improved 61%. Sleep habits improved 20%. There was a 7% improvement in catatonia and 39% in retardation. Affectivity im-

¹ Mississippi State Hospital, Whitfield, Miss.

level 83%; depression 12%; association with other people 68%. Required supervision in work and recreation was reduced by 39%. Orientation improved 47%, confusion 45%, relevance 37% and coherence 21%. In cases of chronic brain syndrome associated with senile brain disease alertness was improved and confusion lessened. In cases of chronic brain syndrome associated with cerebral arteriosclerosis, clarity of thinking increased and orientation was improved. Psychosomatic delusional trends were greatly reduced and a feeling of weakness due to required large doses of neuroleptics was compensated by Ritalin. Hypotension due to neuroleptic drugs was brought to a more satisfactory level by the use of Ritalin. Case histories demonstrate these

improvements. Side reactions occurred in 27% of the cases and were alleviated by a reduction of dosage or the discontinuation of the medication. None was serious. All are described in detail.

CONCLUSIONS

The use of a universal measuring stick, the International Business Machine rating scale, makes the findings before and after phrenotropic drug trials comparable and intelligible to all workers in the field of neuropsychiatry.

Ritalin is a useful phrenotropic drug in many neuropsychiatric cases showing lethargy, retardation, confusion, inertia and depression, constitutional or drug induced.

DEANOL (DEANER) A NEW CEREBRAL STIMULANT FOR THE TREATMENT OF NEURASTHENIA AND MILD DEPRESSION: A PRELIMINARY REPORT

FREDERICK LEMERE, M.D., AND JAMES H. LASATER, M.D.¹

The pharmacological treatment of depression and nervous exhaustion has depended, for the most part, on the use of cerebral stimulating drugs. While these, together with mild sedation or tranquilization, often give some measure of symptomatic relief they leave much to be desired from the standpoint of therapeutic effectiveness.

The amphetamines (Dexedrine, etc.) have the drawback of producing increased tension, insomnia and reduced appetite in many patients. Pipradrol (Meratran) and methylphenidate (Ritalin) have fewer side-reactions but are usually less effective than the amphetamines. Isoniazid and ipromiazid (Marsilid) have not been, in our experience, of much value in treating depression. Nor has liothyronine (Cytomel) been particularly beneficial in the treatment of neurasthenia. The tranquilizers seldom help and may even aggravate depression and exhaustion.

For these reasons, we have been interested in experimenting with a new agent called deanol ('Deaner' para-acetylaminobenzoate).² Deanol is a precursor of acetyl-

choline which is essential to the transmission of impulses between neurons. Theoretically, anything that would facilitate acetylcholine formation would stimulate the reactivity of the nervous system.

Since April, 1957, we have tried deanol in over 100 patients suffering from various psychiatric disorders especially exhaustion and depression. The clinical effect has been increased energy and lessened depression in the majority of these cases. Improvement, when it occurs, is usually noticed within a few days after initiating medication. The dosage has ranged from 10 to 50 mgs. (average 25 mgs.) given as a single daily oral dose after breakfast.

No side effects have been noticed except for a feeling of overstimulation in a few cases. This can be controlled by a reduction of dosage. No interference with sleep or appetite was noticed and sometimes appetite and sleep have even improved. There is seldom a sudden stimulation followed by a let-down feeling such as is sometimes seen with the use of other cerebral stimulants. Deanol does not produce a false euphoria or dependency and none of these cases

¹ From the department of psychiatry, Univ. of Washington School of Medicine, Seattle, Wash.

² Deanol (Deaner) by courtesy of Dr. Joan Thompson, Riker Laboratories, L. A.

formed a habit or developed a tolerance to this drug. Some chronic cases have taken deanol for 6 months with continued benefit and no ill effects. Most patients spontaneously discontinue this medication as they feel better.

Although this has been only a preliminary clinical trial from which no final conclusions can be drawn, we have been impressed by the results thus far. Approximately 70% of

the patients taking deanol have expressed a preference for this medication over other previously mentioned drugs used for the relief of mild depression and nervous exhaustion. Deanol, unfortunately, does not seem to help severe depressions especially those with agitation. A few cases of obsessive-compulsive neuroses have been helped, and we are also interested in further trials with simple senility and schizophrenia.

INEFFECTIVENESS OF MEPAZINE (PACATAL)

HERMAN C. B. DENBER¹

This report deals with the use of mepazine (N-methyl-piperidyl-(3)-methyl-phenothiazine) in treatment of 30 male and 17 female acute and chronically ill patients from 4 to 155 days; 40 were diagnosed as schizophrenia. The ages ranged from 18 to 63 years. Twenty-four had received chlorpromazine alone or with physiological treatments, while 11 had received electroconvulsive therapy, insulin coma or lobotomy, alone or in combination. These were all unsuccessful. Mepazine was the first treatment for 12 other patients. Twenty-three patients were hospitalized 29 days or less before treatment, 7 between 50 and 89 days, and 17 from 6 months to more than 5 years.

The initial dose was either 50 mg. (2 patients) or 100 mg. 3 times daily (45 patients). At the end of treatment, 3 patients were receiving 50 mg. t.i.d., 27 took 100 mg. t.i.d., and the others between 200 and 300 mg. t.i.d. Eight patients were treated less than 29 days, 22 between 30 and 89 days, 14 between 90-149 days, and 3 more than 150 days.

Side effects were as follows: Blurred vision—9, convulsive seizures—5, neurological syndrome of a cerebellar type—2, hypertension—1, fever—1, dryness of mouth—1, buttock abscess—1, skin rash—1, glossitis—1, fecal impaction—2.

The criteria for evaluation of clinical

change have been described elsewhere(1). Four patients were much improved, 12 were improved, and 31 were unimproved.

Comment: Some sedative action was apparent at the outset of treatment. Chronic male patients were for the most part unresponsive. A paradoxical reaction of increased agitation was noted at higher doses (900 mg. daily). Acutely ill recently admitted patients could not be controlled rapidly even with the intramuscular preparation. The treatment in these cases had to be abandoned within several days. One patient had 3 seizures in one day. Blurring of vision was bothersome to many. Fecal impaction was a serious problem until the real nature was recognized. It can lead to laparotomy unless diagnosed rapidly.

This compound has some clinical action, and could be grouped with the weaker phenothiazines. Mepazine did not produce an extra-pyramidal syndrome. This would strengthen the hypothesis that a drug's effectiveness is somehow related to such a reaction; although the latter is not necessary to achieve a favorable result. While undoubtedly further studies with mepazine on a larger scale are needed, this investigation does not confirm its ability to "normalize the thinking processes."

BIBLIOGRAPHY

1. Denber, H. C. B., and Bird, E. G.: *Am. J. Psychiat.*, 113:972, May 1957.

¹ Manhattan State Hospital, Ward's Island, New York City 35, N. Y.

HISTORICAL NOTES

SIR THOMAS BROWNE, *RELIGIO MEDICI*, AND THE HISTORY OF PSYCHIATRY

JEROME M. SCHNECK, M.D.¹

The story of witchcraft is an important part of the history of psychiatry. Sir Thomas Browne (1605-1682) has been linked with this story because he testified at a trial of two women who were later convicted and executed. Browne is the author of the classic *Religio Medici*. Bromberg's (1) reference to Browne, in his history of psychotherapy, is actually an allusion to the trial near Norwich where Browne practiced medicine. Browne's testimony affirmed his belief in the sinister operations of the devil and in the existence of witches. For many years opinions have differed on his role in this trial, and responsibility, if any, in the conviction of the accused. Belief in witchcraft was commonplace at that time among the educated class as well as the uneducated. Sir William Osler (2) wrote about Browne's evidence having helped to condemn the women on trial. An editor's footnote to Osler's essay states the accused were condemned in spite of, not with the help of Browne's testimony. Major (3) records it as largely responsible for the conviction. Finch (4), in a recent biography, chooses to view the issue, described in greater detail than usual, as testimony on bewitchment with no opinion as to guilt or innocence of the accused. He alleges that whatever influence his words may have had cannot be ascertained, but he wishes Browne could have been so bold as to question the existence of witches. Finch lists Francis Bacon, William Harvey, and Robert Boyle as believers in witchcraft. Osler, incidentally, had referred to Reginald Scot and Johannes Wierus (Johann Weyer), as "really anomalies" because their views differed so from their contemporaries.

¹ Clinical assistant professor of Psychiatry, State University of New York College of Medicine at New York City; Address: 26 West 9th Street, New York City.

There are points of interest about Browne beyond his association with the aforementioned witch trial. I shall attempt to illustrate first, comments indicative of his views on the devil and witches; second, a statement showing that his knowledge about mental derangement transcended any limited association with demonology and was thus more consistent with facts and experience available to physicians before him and of his time; third, and of special concern here, observations indicating Browne's psychological perceptiveness which deserves a place equal to or surpassing his more limited connection with the story of witchcraft. The implications of his psychological mindedness will be commented on later.

Excerpts in illustration of these themes are taken from the 300-year-old classic and "best-seller," *Religio Medici*. It was written when Browne was 30 years old, at the start of his medical career, and after he had been educated at Oxford, Montpellier, Padua, and Leyden where he received his degree in medicine. His book has appeared in numerous editions, and the title, incidentally, may have been the choice of a transcriber. Much in this volume which helps to build a portrait of the man and his personality will not be touched upon here. A full-length study is available in Finch. The text used here is the critical edition of Denonain, published first with a bibliographical introduction and notes (5), and later with a biographical and critical introduction (6).

First we observe this statement, "I am, I confesse, naturally inclined to that, which misguided zeale termes superstition." Later he says,

For mine owne part, I have ever beleevved, and doe now know, that there are Witches: they that doubt of these, doe not onely deny them, but Spirits; and are obliquely and upon consequence a sort not of Infidels, but Atheists. Those that to confute their incredulity desire to see apparitions, shall ques-

tionlesse never behold any, nor have the power to be so much as Witches; the Devill hath them already in a heresie as capitall as Witchcraft; and to appeare to them, were but to convert them.

He goes on to say,

I could beleieve that Spirits use with men the act of carnality, and that in both sexes; I conceive they may assume, steale, or contrive a body, wherein there may be action enough to content decrepit lust, or passion to satisfie more active veneries; yet, in both, without a possibility of generation. . . .

At one point a question arises momentarily about Browne's concept of the devil. "The heart of man is the place the devill dwells in." Soon after he says, however,

Who can but pity the mercifull intention of those hands that doe destroy themselves? the devill, were it in his power, would doe the like; which being impossible, his miseries are endlesse, and he suffers most in that attribute wherein he is impassible, his immortality.

Was Browne capable of seeing psychological disturbance that did not incorporate demonological concepts? Apparently he did, and a precise statement is available. Following his comment about spirits and carnality we read, "I hold that the Devill doth really possesse some men, the spirit of melancholy others, and the spirit of delusion others. . . ." His observation should not be surprising because melancholia and psychoses with delusion had been known, observed, and recorded for centuries. His medical education at leading centers, even without extensive practical experience, should have resulted in acquaintance with at least such disorders.

Shortly following the last quotation is an observation which makes one wonder again about the witch trial at which he testified. Did he cite such views at that time?

Again, I beleieve that all that use sorceries, incantations, and spells, are not Witches, or, as we terme them, Magicians; I conceive there is a traditionall Magicke, not learned immediately from the Devill, but at second hand from his Schollers; who having once the secret betrayed, are able, and doe empirically practice without his advice, they both proceeding upon the principles of nature: where actives, aptly conjoynd to disposed passives, will under any Master produce their effects. Thus I thinke a great part of Philosophy was at first Witchcraft, which, being afterward derived to one another, proved but Philosophy, and was indeed no more then the honest effects of Nature. . . .

Religio Medici contains many astute and discerning insights into psychological experience and functioning. These invite special attention because they have not been stressed previously with the purpose of showing the modern sound they possess. The comments are quite in line with current writings which deal with dynamics of personality functioning, the nuances of interpersonal relations, and subtleties of everyday psychological experience which are finding their way more and more into the medical psychology of present-day psychiatric knowledge and practice. Because of this, Browne must be regarded anew and in a different light for the role he plays in the history of psychiatry. Such a view could not have been possible, of course, before recent developments in psychiatry. No one observation among the following is in itself unique, nor does Browne stand alone among his contemporaries in the direction of his thought. The sum of his ideas expressed within the confines of a published work does, however, merit attention.

Here are some statements culled from Browne's book.

Hee that relieves another upon the bare suggestion and bowels of pity, doth not this so much for his sake as for his own: for by compassion we make anothers misery our own, and so by relieving them, we relieve our selves also.

Elsewhere we find,

Further, no man can judge another, because no man knowes himselfe, for we censure others but as they distaunce from that humour which wee fancy laudable in our selves; and commend them but for that wherein they seeme to quadrate and consent with us.

Shortly afterwards we read,

But how shall we expect charity towards others, when we are all uncharitable to our selves? Charity begins at home, is the voice of the world, yet is every man his greatest enemy, and, as it were, his own executioner.

In other sections Browne wrote,

Another misery there is in affection, that whom we truly love like our owne, wee forget their looks; nor can our memory retaine the Idea of their faces; and it is so wonderful for this are our selves, and our affection makes their looks our owne.

I have not met with any more conscience, if I should say I am at variance with any thing like my selfe; I finde there are many pieces in this one fabricke of man; and that this frame is reared upon

a masse of Antipathies: I am one mee thinkes, but as the world; wherein notwithstanding there is a swarme of distinct essences, and in them another world of contrarieties; wee carry private and domesticke enemies within, publike and more hostile adversaries without.

We read other items of interest.

There is another man within mee that's angry with mee, rebukes, commands, and dastards mee. I have no conscience of Marble to resist the hammer of more heave offences, nor yet so soft and waxen, as to take the impression of each single peccadillo and scape of infirmity. I am of a strange belief, that it is as easie to be forgiven some sinnes, as to commit others.

Elsewhere is the following:

I cannot fall out or contemne a man for an error, or conceive why a difference in opinion should divide an affection: for controversies, disputes, and argumentations, both in Philosophy, and Divinity, if they meete with discreet and peacable natures, doe not infringe the Lawes of Charity. In all disputes, so much as there is of passion, so much there is of nothing to the purpose; for then reason, like a bad hound, spends upon a false sent, and forsakes the question first started. And this is one reason why controversies are never determined; for, though they be amply proposed, they are scarce at all handled, they doe so swell with unnecessary Digressions, and the Parenthesis on the party is often as large as the maine discourse upon the Subject.

These observations following are also of interest:

Diogenes I hold to bee the most vaine glorious man of his time, and more ambitious in refusing all Honours, than Alexander in rejecting none.

And this is followed by,

Againe, the practice of men holds not an equall pace, yea, and often runnes counter to their Theory: we naturally know what is good, but naturally pursue what is evill: the Rhetoricke wherewith I perswade another cannot perswade my selfe: there is a depraved appetite in us, that will with patience heare the learned instructions of Reason; but yet performe no farther than agrees to its owne irregular Humour.

Other sections contain these statements.

Persecution is a bad and indirect way to plant Religion; it hath beene the unhappy method of angry devotions, not onely to confirme honest Religion, but wicked Heresies, and extravagant opinions.

A related item reads,

Those have not only depraved understandings but diseased affections, which cannot enjoy a singularity without a Heresie, or be the author of an opinion without they be of a Sect also.

Elsewhere Browne, said,

As Reason is a rebell unto Faith, so passion unto Reason: As the propositions of Faith seeme absurd unto Reason, so the Theorems of Reason unto passion, and both unto Faith; yet a moderate and peacable discretion may so state and order the matter, that they may bee all Kings, and yet make but one Monarchy, every one exercising his Sovereignty and Prerogative in a due time and place, according to the restraint and limit of circumstance.

And the next observation should be a good closing note:

I could never divide my selfe from any man upon the difference of an opinion, or be angry with his judgement for not agreeing with mee in that, from which perhaps within a few dayes I should dissent my selfe.

Opinions have differed in the description of *Religio Medici*. It has been seen as a religious, spiritual, philosophical, and essentially a literary work. In addition, it is significantly autobiographical. The excerpts presented here appear to warrant considering it, at least in part, a psychological work in the modern sense. Surely it is not completely a psychological essay. In adopting this opinion it is clear that only as a result of recent trends in medico-psychological interests can *Religio Medici* be categorized in this way. The psychological observations have been gathered here in compact form. They are, of course, scattered in the original text. Browne's pithy statements are gems of insight. His views have since been elaborated and incorporated into the expanding body of knowledge comprising a present-day psychology of personality. The current familiarity to his insights should not be regarded as having been everyday fare among his contemporaries. If his comments are examined closely, it can be seen that he was aware of a variety of psychological dynamisms. Expressed in modern terms they consist of mechanisms of compensation, rationalization, displacement, identification, introjection, repression and reaction formation. Others may be discovered in various sections of the book, and a small part of the *Religio Medici* contains notes on dreams. Browne's intuitiveness apparently extended to an awareness of the existence of unconscious components in personality functioning, although the term, 'unconscious' is not used. He fathomed the subtleties and distorted evidences of love and

hate and the turmoil of inner contradictions.

Zilboorg(7), in his history of medical psychology, credits Esquirol with introducing the term "hallucinations" with its modern definition. It is of interest, however, that Finch reminds us of Browne's coinage and popularization of many terms, and "hallucination" is among them.

In summary, it can be said that Sir Thomas Browne is of interest in the history of psychiatry because, as the widely known seventeenth century physician-author of the famous *Religio Medici*, he testified at a trial for witchcraft. His testimony supported the popular belief in witches, the accused were executed, and opinions differ on the significance and weight of his testimony for the outcome of the trial. He may not really have shared in the responsibility for this outcome. Probably more important, however, is the view that can be obtained of Browne's psychological insights and intuitiveness revealed in passages of his classic book. His perceptive observations, when gathered together, show a keen and discerning mind. His re-

flections reveal knowledge of psychological motivations and functioning which, only since the rise of a dynamic psychiatry, has become further enriched and organized as part of that present-day professional discipline. As a forerunner of psychologically minded physicians of today, Browne deserves further study and evaluation.

BIBLIOGRAPHY

1. Bromberg, W. *Man Above Humanity*. Philadelphia: J. B. Lippincott, 1954.
2. Osler, W. *Selected Writings of Sir William Osler*. London: Oxford University Press, 1951.
3. Major, R. H. *A History of Medicine*, 2 vols. Springfield, Ill.: Charles C Thomas, 1954.
4. Finch, J. S. *Sir Thomas Browne*. New York: Henry Schuman, 1950.
5. Denonain, J. J. *Sir Thomas Browne, Religio Medici*. London: Cambridge University Press, 1953.
6. Denonain, J. J. *Sir Thomas Browne, Religio Medici*. London: Cambridge University Press, 1955.
7. Zilboorg, G., and Henry, G. W. *A History of Medical Psychology*. New York: W. W. Norton, 1941.

SCIENCE AND SOCIETY

Science is a cherished tradition in the West. Our progress in science stands as a stupendous and spectacular intellectual achievement, by means of which civilized man has won marvellous mastery over his physical environment. In a very literal sense, we have achieved what man has so mightily striven for in all his long and tortuous history—conquest over the physical world in which he lives.

Our next task, so forcefully apparent in the 20th century, is to gain mastery over ourselves. It is now the human environment that is the problem. Here in this social universe are the forces which threaten the survival of modern man, just as wind and weather did in earlier periods. And the truth of the matter is that we stand, in our understanding of these forces, about where the savage stands in his understanding of the elements.

—VAN CLEVE MORRIS,
Associate Professor of Education,
Rutgers University.
(Scientific Monthly. Sept. 1957)

CORRESPONDENCE

MURDER BY ADOLESCENTS

Editor, THE AMERICAN JOURNAL OF PSYCHIATRY:

SIR: Regarding "Murder by Adolescents with Obscure Motivation" by A. Warren Stearns, M. D., in the October Journal, the following comments seem appropriate.

As a former court psychiatrist, I wish to take exception to the statement that "no motive has ever been established." On the contrary, the motivation in these cases seems to be rather clear. It is true that, consciously, the patient (or criminal) may not have been aware of his motivation. This is so often true in psychiatry.

It appears fairly obvious that the four examples given are episodes of the explosive release of aggressive (sexual) forces of an unconscious nature. These are strongly present in the typical healthy adolescent.

In the present cases, it appears that for

one reason or another, these aggressions were much more inhibited than in the typical adolescent. This is shown by the extra "good" behavior each boy showed prior to the murders. Thus, aggressive (sexual) tensions built up to a high level prior to the event which triggered their explosive release.

More complete histories undoubtedly would clarify the details of the dynamics involved.

From my personal experiences, I could add an additional, similar case. An adolescent messenger suddenly stabbed a young female office worker, whom he had never seen before, using a paper knife from her desk.

This is an example of the importance of dynamic thinking being used in modern forensic psychiatry.

R. K. GREENBANK, M. D.,
Upper Darby, Pa.

REPLY TO THE FOREGOING

Editor, THE AMERICAN JOURNAL OF PSYCHIATRY:

SIR: I thank you for letting me see Dr. R. K. Greenbank's letter. I am much interested in his conjecture concerning motivation. It seems to be entirely reasonable. Not being skilled in "dynamic thinking being used in modern forensic psychiatry," I shall

make no attempt to discuss his hypothesis. I am gratified that he recognizes that these cases represent a special type and would suggest that it would be interesting if he would publish his cases and the data supporting his hypothesis.

A. WARREN STEARNS, M. D.,
Billerica, Mass.

THINKING

Man is a reed, but a thinking reed; all our dignity consists in thought. Endeavor then to think well; it is the only morality.

—PASCAL

COMMENT

PSYCHIATRIC IMPLICATIONS OF THE "PLACEBO EFFECT"

In recent years the "placebo effect" has aroused increased interest. Despite its demonstrated therapeutic and scientific potential, however, the "placebo" continues to have disreputable connotations which impede investigation of its modes of action and the conditions influencing them. It therefore seems appropriate and necessary to summarize the current understanding of the nature of the "placebo effect" and some of its implications for treatment and research.

For this purpose one needs to consider the nature of a patient's expectations, and what he may be led to expect by circumstances and by the actions and attitudes of those around him.

The sick person usually experiences some degree of apprehension and depression arising from his discomfort and his impaired functioning. The severity of this emotional reaction varies widely and depends on many factors. Apprehension may, in some cases, be detectable only through the patient's abnormal defense against it, as when he denies that he is ill although he is obviously sick. Any illness may be aggravated by reactive apprehension and depression which directly increase suffering and interfere with sleep and appetite. The accompanying autonomic disturbances may intensify the pathological processes and counteract the patient's response to medication.

The physician's ability to relieve the emotional, reactive aspects of a patient's illness through symbolic operations is therefore an important aspect of his healing function. This power is closely related to the patient's expectations. These vary widely among patients, depending on such factors as the patient's previous experiences with physicians and medications, his personal knowledge of the physician, the reputation of his physician in the community, the community belief in the recent achievements of medical science, various relevant properties of the institution or the setting in which the physician operates,

and the physician's personality and behavior and his own expectancies as to what he can accomplish.

In our society the physician is invested with certain unique prerogatives, among them the right to prescribe medication. Hence the prescription, pill, or injection symbolizes the physician's healing function. As such, it typically reinforces the patient's expectancy of help and counteracts his sense of helplessness and dread in the face of his illness. The prescribing of a pharmacologically inert substance may thus, through its symbolic significance, produce favorable effects. By the same token, it can heighten the apprehensiveness of patients who have fearful expectancy of medication and thereby set off visceral and somatic disturbances.

The frequent efficacy of medicine in potentiating and fulfilling the patient's expectancy of relief plays a part in the effectiveness of all medication. A homely example is the common experience that the ingestion of an aspirin tablet may relieve a headache almost instantly, more quickly than could be explained by its pharmacological action. The favorable effects of symbolic medication are not limited to the pill. The doctor's calm reply to a frantic telephone call, or the setting of an appointment for next Tuesday, may bring a magical relief of distress.

A medication which is used to relieve a patient's distress, without specific pharmacological action, solely by its power to reinforce his favorable expectancies, has become known as a "placebo," which freely translated means "I am to placate." The term itself clearly expresses the customary purpose of the harassed or impatient physician to placate a complaining and demanding patient. In actual practice it is uncommon for physicians to prescribe wholly inert substances. In the commoner type of "placebo" medication, active substances are prescribed in small doses which are pharmacologically ineffective under the circumstances but harm-

less, such as vitamin capsules or the bottle of "pink medicine" containing a small amount of phenobarbital. Historically, the term "placebo" implies an exploitation of the patient's credulity, also, in a sense, a lack of confidence of the physician in his own healing skill since, if he had a specific remedy for the patient's complaints, he would use it. At times, physicians have prescribed placebos for their own convenience and advantage, rather than primarily for the patient's welfare. When the placebo is used for such unworthy purposes and with neglect of necessary diagnostic studies, it deserves to be held in disrepute. Many physicians feel a natural repugnance for the systematic employment of any lying or deceitful measure, even though there may be beneficial effects, if the same effects can be obtained by frank and honest means.

Some of the implications of the physician's shame or defensiveness in using a placebo may be unfairly projected upon the patient who responds favorably to it; but a "placebo effect" should not bring discredit on the patient. It does not mean that illness is absent or feigned. It does not imply simple-mindedness or gullibility. Instead it indicates a preparedness to be helped, a willingness to trust a help-giver, and a responsiveness to the physician as a person as well as to him as a culturally established symbol of healing. A positive placebo response is often a favorable prognostic sign.

Since emotional reactions such as apprehension and depression play a particularly large part in psychiatric illnesses, the placebo may be a potent remedy in these disorders. By mobilizing the patient's faith in the therapist, and therefore in his own ability to recover, it can not only relieve subjective distress but can also increase self-confidence. This in turn may release certain assets and capacities, which, though not basically impaired by the illness, were kept from functioning by it, thereby setting in motion a series of therapeutically helpful and hopeful events.

In the short term view it might seem desirable to use the placebo extensively for its potency in mobilizing the patient's favorable expectancies, but two considerations suggest

the unwisdom of this. In the first place, when the patient's distress arises from emotional strains incident to interpersonal difficulties, the giving of a placebo or any medication may implicitly confirm the patient's desire to believe that his symptoms result from bodily processes, the cause of which can be removed by medicine. This may divert him from the primary task of resolving his difficulties with other persons. Therefore the use of a placebo would ordinarily be inappropriate in such cases, unless or until, this unfavorable possibility can be circumvented. Furthermore, the widespread prescription of placebos would generally involve deceit which, when it became known, would undermine the mutual confidence of patient and doctor and thus destroy the faith without which they are ineffective. To maintain its effectiveness, use of the placebo must therefore be strictly limited.

The placebo effect, though elicited by disarmingly simple means, is actually a manifestation of complex and important psychological processes, which marshall, reinforce, and fulfill certain important health-promoting factors in therapy. Study of the determinants of this effect in patient, physician, and situation has already offered promising leads into a common denominator of all successful psychotherapy—the reinforcement of the patient's faith. Thus the placebo affords a means of subjecting to scientific investigation an aspect of psychiatric and medical treatment which has hitherto been regarded as belonging exclusively to the art of medicine. There is need for further research in the complex psychodynamics of the placebo.

For purposes of abstract discussion, it is convenient to designate as "placebo" effects all those psychological and psychophysiological benefits or detriments which quite directly involve the patient's expectations and depend directly upon the diminution or augmentation of the patient's apprehension by the symbolism of medication or the symbolic implications of the physician's behavior and attitudes. The "non-placebo" effects of a medication or of a procedure can be conveniently designated as its "inherent" effects. These distinctions are abstract. In concrete reality probably there is always a combination of

placebo effects and inherent effects, as here designated. That is to say, a fully adequate pharmacological description of a drug should in the light of our present knowledge include a characterization of the patient's attitudes which determine differences in its effects. To evaluate the "inherent" effects requires appropriate placebo controls, *e.g.* the "double-blind" technique.

Just as it has been said, in general, that any illness may have a superimposed layer of apprehensive and depressive reaction, so it may also be said that every medication, or other therapeutic procedure, may have both

placebo potency and inherent potency. This generalization would include psychotherapy. To elucidate and to differentiate the placebo effect and the inherent effect much painstaking planning and conduct of control studies is necessary in the evaluation of any drug or procedure used for human illness. In such a study of psychotherapy a simple "double blind" technique is not feasible. In order to reach reliable conclusions as to the nature and combination of the processes involved in psychotherapy it is hoped that a variety of investigators will turn their attention to this complex problem.

J.C.W.

DR. GERTY JOINS EDITORIAL BOARD

At its meeting in Boston, November 24, 1957, the Council of The American Psychiatric Association appointed Dr. Francis J. Gerty, president-elect, of Chicago, to the Editorial Board of the *American Journal of Psychiatry*. It is a pleasure to welcome Dr. Gerty to the fellowship of the board. This restores the number of members to the traditional thirteen, which is a memorable number in the history of the Association.

NINETEENTH CENTURY AMERICAN MIND

Franklin and McGuffey did more to form the "American mind of the nineteenth century" than is always recognized. Much of the effective down-to-earth attitudes of American life that has been so often commented on by European travelers can be traced to these two sources.

—LEONARD CARMICHAEL
(Basic Psychology)

SCIENCE AND NON-SCIENCE

Science should not concern itself in any way with the philosophical consequences of its discoveries. If through the development of any experimental studies I come to demonstrate that matter can organize itself of its own accord into a cell or into a living being, I would come here to proclaim it with the legitimate pride of an inventor conscious of having made a great discovery, and I would add, it provoked to do so, "All the worse for those whose doctrines or systems do not fit in with the truth of the natural facts.

—LOUIS PASTEUR

ADOLF MEYER

M. D. ZÜRICH 1892

NIEDERWENGEN, CH. ZÜRICH
JULY 1865

BALTIMORE, MARYLAND
JULY 1950

HIS GENIUS FOR SOUND CLINICAL METHODS
AND CLARIFYING HUMAN AND BIOLOGICAL CONCEPTS
SHAPE MODERN AMERICAN GENETIC-DYNAMIC PSYCHIATRY
AND LAID THE FOUNDATIONS FOR AN ORGANISMAI AND
MELIORISTIC SCIENCE OF MAN.

FORGIVEN OUR FATHER JOSEPH'S GRIEVING INSTEAD
THAT OURS WOULD BE
THAT OURS WOULD BE
OUR FATHER'S GRIEVING INSTEAD
THAT OURS WOULD BE
OUR FATHER'S GRIEVING INSTEAD
THAT OURS WOULD BE
OUR FATHER'S GRIEVING INSTEAD

BELOVED PHYSICIAN, TEACHER, FRIEND

NEWS AND NOTES

ADOLF MEYER MEMORIAL PLAQUE UNVEILED.—As previously noted (Am. J. Psychiat., pp. 1042, May 1957) the plaque opposite was unveiled in memory of Adolf Meyer at Burghölzli Hospital, Zurich, September 5, 1957, by Prof. Manfred Bleuler. A large number of former pupils, friends and members of the family of Dr. Meyer were in attendance.

Three men who had been closely associated with Dr. Meyer—Sir David Kennedy Henderson, Dr. Oskar Diethelm, and Dr. Oscar Forel—spoke on various aspects of Dr. Meyer's outstanding contribution to psychiatry. Sir David Henderson emphasized the impact that Dr. Meyer's teaching had on students from many different countries who came to study under him, who, in their turn have done much to further and extend the whole field of psychiatry in their native lands.

Dr. Diethelm referred to Meyer's establishment of the discipline of psychobiology, and his emphasis upon the integration of mind and body, which paved the way for the later appearance of psychosomatic medicine.

The meetings concluded with a vote of thanks to Dr. Wendell Muncie, long-time associate of Dr. Meyer, from whom had come the inspiration to take the opportunity afforded by the meeting in Zurich of the 2nd International Congress of Psychiatry to establish a memorial to Adolf Meyer at Burghölzli.

HONOR FOR DR. DUNTON.—The American Occupational Therapy Association honored itself by bestowing upon Dr. William Rush Dunton its Award of Merit for outstanding contributions extending over many years. This is the highest honor within the Association's gift and signalizes the pioneer work of Dr. Dunton, beginning in the eighteen-nineties when he was assistant physician at the institution now known as the Sheppard and Enoch Pratt Hospital. The occupational therapy department he organized there be-

came an essential part of the treatment program of the hospital.

Dr. Dunton was one of the incorporators in 1917 of the National Society for the Promotion of Occupational Therapy. Four years later the name of this organization was changed to the American Occupational Therapy Association, of which Dunton served as treasurer and later as president.

He is the author of 83 published papers and several books on occupational and reconstructive therapy, beginning with *Prescribing Occupational Therapy* (1928). The latest book, co-authored with Sidney Licht, is *Occupational Therapy, Principles and Practice* (1950). A third edition is now in preparation.

Dr. Dunton is a greatgrandson of America's first sculptor, William Rush, whose statue of Washington is in Independence Hall, Philadelphia. William Rush made portrait busts of his two daughters, which are in the Philadelphia Museum of Art, gifts of Dr. Dunton. One of these daughters, Mary, was W.R.D.'s grandmother. William Rush was a cousin of Benjamin Rush. This indicates the family relationship of W.R.D. to the "Father of American Psychiatry."

Dr. Dunton has been versatile as a musician and impressario; as part of his occupational therapy activities, he originated, stage-directed and participated in numerous hospital stage plays. At one of these he received a bouquet addressed to "Charles Frohman Dunton."

As a member of the Editorial Board of the *American Journal of Psychiatry* our Associate has served longer than any other board member. As assistant physician on the staff of Dr. Edward N. Brush, our former Editor, his work on the Journal dates from some 20 years before his official appointment to the Board. The fiftieth anniversary of the beginning of this service was honored by the Council of The American Psychiatric Association at its meeting last year by the presentation to Dr. Dunton of a special certificate attesting his unique collaboration in the editorial work of the Journal.

PSYCHIATRIC GRADUATE TRAINING IN NORWAY.—For many years graduate training for psychiatrists in Norway consisted of a 4 years' residency in mental hospitals and departments for neurotics. In accordance with Norwegian traditions the psychiatrist-to-be can be a resident at different hospitals during the training; he must work at least one year in a mental hospital and one year in a department for neurotics.

The *practical* part of the graduate training is thus satisfactory considering the fact that each doctor is bound to have gone through the regular medical and surgical hospital services and to have done at least one year's work as a general practitioner or as an assistant to a civil medical officer, before he can become a specialist.

The *theoretical* part of the graduate training has however been rather insufficient. Different hospitals had started courses for their residents, but there has been no unity or consistency in the programs.

After Dr. Eitinger from the Oslo University Psychiatric Clinic had studied graduate training in the United States, he raised the subject at a meeting of the Norwegian Psychiatric Association, and was appointed chairman of a committee to consider the possibilities of graduate training. At the last annual meeting of the Norwegian Psychiatric Association the committee's report was presented and approved; and there has now been started a regular course of lectures lasting 8 months, under the leadership of Professor Ödegård from the Gaustad Mental Hospital, Docent Eitinger from the Psychiatric Clinic, Oslo University, and Dr. Houge, a private practitioner in psychiatry.

The course covers both the basic sciences and clinical psychiatry. Since there does not exist compulsory theoretical graduate training in any speciality in Norway, even this course in psychiatry could not be made compulsory. The interest in the subject, however, shown by all psychiatrists in training, was so great that the number of participants had to be limited from the very beginning.

NATIONAL FOUNDATION FOR INFANTILE PARALYSIS.—Since 1938, the National Foundation has authorized \$30,900,000 for research in infantile paralysis and \$28,900,000

in aid of professional education. These funds were available because of the traditional March of Dimes Campaign held in January of each year. In addition, over a quarter of a billion dollars has been spent to provide for patient services.

The greatest single handicap in providing services to patients, as well as in extending research, is the lack of professional personnel. Since 1940, the National Foundation has provided grants to universities to assist the expansion of teaching programs; and to encourage improvement of educational standards and enlargement of services, it has made grants to professional agencies and associations.

The National Foundation solicits continued support of the March of Dimes Campaign in January, 1958.

KAREN HORNEY AWARD.—The Karen Horney Award has been established by the Association for the Advancement of Psychoanalysis. An award of \$150.00 will be made annually to the author whose paper makes an outstanding contribution toward the development of psychoanalysis. Papers submitted by May 30, 1958, will be evaluated in time for the award on December 30, 1958. The accepted paper will be published in the *American Journal of Psychoanalysis*.

Entries should be forwarded to: Louis E. De Rosis, M. D., Chairman, Award Committee, 815 Park Avenue, New York 21, N. Y.

GALESBURG RESEARCH ON ALCOHOL.—The Galesburg State Research Hospital will conduct an Institute on Alcohol, in co-sponsorship with the University of Illinois College of Medicine, at the Galesburg State Research Hospital on January 29, 1958. This program will be conducted by the American Medical Association Committee on Alcoholism of the Mental Health Council.

Speakers will include Drs. Selden D. Bacon, Ph.D., Harold E. Himwich, Robert Fleming, Marvin A. Block, and Jackson A. Smith.

COMMONWEALTH FUND 39TH ANNUAL REPORT.—This fund disbursed during 1956-57 over 3½ million dollars, in 54 separate grants, in the fields of health, medical re-

research and medical education. Support was given to 25 different projects in research with the following grants for research programs in neuropsychiatry: Harvard Medical School, for psychiatric research in gynecology, study of childhood schizophrenia and physiological studies of the pineal glands and psychoses; Tulane University School of Medicine, for studies in schizophrenia; Yale University Child Study Center for study of personality development; University of California School of Medicine, for neuroendocrine responses to environmental stimuli, and studies of neural correlates of mental activity; New York University College of Medicine, for studies of cerebral function.

In addition the fund provided individual fellowships and awards in the health field, 5 of which were given to doctors for psychiatric studies.

RESEARCH FELLOWSHIPS IN PSYCHIATRY.

—The Foundations' Fund for Research in Psychiatry wishes to announce that February 1, 1958, is the next deadline for the submission of applications for research fellowships in psychiatry, psychology, sociology, neurophysiology, and other sciences relevant to mental health. Interested persons and departments are invited to write to Foundations' Fund for Research in Psychiatry, 251 Edwards St., New Haven 11, Conn.

ISRAEL S. WECHSLER LECTURE.—The annual Israel S. Wechsler Lecture was given on the evening of December 13, 1957, at the Mount Sinai Hospital, New York City, by Dr. Herbert H. Jasper, Professor of Experimental Neurology, McGill University, Montreal. The topic: Progress and Problems in Brain Research.

DR. DAVIDSON HEADS OVERBROOK HOSPITAL.—Dr. Henry A. Davidson became the superintendent of the Essex County Overbrook Hospital at Cedar Grove, N. J., on October 10, 1957. A former member of The American Psychiatric Association Council, Dr. Davidson is also Parliamentarian of the Association. He is editor of the *Journal of the Medical Society of New Jersey*.

As superintendent of Overbrook Hospital, he succeeds Dr. Joseph Sutton, A.P.A.'s

last auditor. Dr. Sutton's predecessor as superintendent was the late Samuel Hamilton, who was president of The American Psychiatric Association in 1946-7.

TRAINING IN MENTAL DEFICIENCY.

Dr. Paul H. Hoch, Commissioner of Mental Hygiene, has announced a series of four 6-week courses of intensive training in mental deficiency for psychiatric residents of recognized training centers, at Letchworth Village, Thiells, N. Y. The first course will begin on the first Monday in February, 1958, and each session will be limited to ten students.

The courses, supported by a grant from the National Institute of Mental Health, and under the direction of Dr. Howard W. Potter, will provide the psychiatric residents with an opportunity to obtain a meaningful perspective of mental retardation and to examine and evaluate the mentally retarded of various clinical types.

Any physician in a psychiatric residency in the United States may apply for the tuition-free courses if he has completed 6 months of residency, has had one year internship in a general hospital, and is endorsed by the director of his residency center.

Information may be obtained by writing the Program Director, Orientation Course in Mental Deficiency, Letchworth Village, Thiells, N. Y.

DEATH OF DR. GAYLE.—With great regret we record the death on November 4, 1957, of Dr. R. Finley Gayle, Jr., of Richmond, Va., following a brief illness. Dr. Gayle had served as president of The American Psychiatric Association for the year 1955-56, after having been secretary for 4 years.

A graduate of the Medical College of Virginia, Dr. Gayle had advanced to the professorship of neurology and psychiatry in the College and had contributed extensively to the medical literature.

A memorial of Dr. Gayle will appear in a subsequent issue of the *Journal*.

THE AMERICAN SOCIETY OF GROUP PSYCHOTHERAPY AND PSYCHODRAMA.—The Society will have its sixteenth annual meeting

on January 3, 4 and 5, 1958 at the Henry Hudson Hotel, New York City.

Information may be obtained from Miss Hannah B. Weiner, 1323 Avenue N, Brooklyn 20, N. Y.

FORD FOUNDATION GRANT TO UNIVERSITY OF PENNSYLVANIA.—The Institute of Neurological Sciences of the University's School of Medicine has received a grant of \$219,450, which will be used to broaden its studies of the nervous system, particularly as related to mental health. This new work includes research and research training in the basic sciences, and in psychiatry. The psychiatric research will be done in collaboration with the department of psychiatry of the School of Medicine, and the Institute of the Pennsylvania Hospital.

The training program will be open to graduate students, medical students, post-doctoral fellows and residents. Dr. Louis B. Flexner of the Institute and the School of Medicine will direct the project.

DR. STRECKER HONORED.—The Medical Staff of The Institute of the Pennsylvania Hospital honored Edward A. Strecker, M. D., F.A.C.P., at a dinner on October 15, 1957, the eve of his 70th birthday. He has been associated with The Institute since 1912.

Dr. Strecker, Emeritus Professor of Psychiatry at the University of Pennsylvania, was president of The American Psychiatric Association (1943-44). He is currently Professor of Psychiatry at Seton Hall School of Medicine in Jersey City, N. J.

REPORT ON PROCHLORPERAZINE.—The proceedings of the Regional Conference of Southern California Neuropsychiatric Hospital reports the collective experience of nine clinicians who used prochlorperazine (Compazine) in the management of severely psychopathic and psychotic patients. Copies of the proceedings may be obtained by writing Dr. Sidney Cohen, Brentwood VA Hospital, Los Angeles 25, Calif.

SCIENTIFIC STUDY OF SEX.—The Society for the Scientific Study of Sex (SSSS) has been organized to bring together scientists

working in the biological, medical, anthropological, psychological, sociological and allied fields who are conducting significant sexual research.

The Society will hold periodic scientific meetings for the presentation of research papers and will organize conferences etc. to consider theoretical and practical problems in the sexual area. It will also publish a scientific journal devoted to relevant original studies.

Minimum requirements for Fellow membership: a doctor's degree or its equivalent in the biological or social sciences plus outstanding contributions to sexual knowledge. Minimum requirements for membership: a graduate degree in the biological or social sciences plus contributions to sexual science.

For further information write: Robert Veit Sherman, 285 Madison Avenue, New York 17, N. Y.

CHRONIC ILLNESS AND HEALTH OF THE AGED.—Surgeon General Leroy E. Burney, of the Public Health Service, has announced the appointment of a 13-member National Advisory Committee on Chronic Illness and Health of the Aged. It is composed of outstanding authorities in the fields of medical education, geriatrics, physical and industrial medicine, nursing, care of the aged, public health and public welfare. The Committee will review the complex medical, social and economic problems associated with chronic illness and aging, and will consult with and advise the Surgeon General in the development of Public Health Service policy and programs in these fields.

ROCKLAND STATE HOSPITAL RESEARCH EXPANSION.—The National Institutes of Health has granted \$240,603 to the New York State Department of Mental Hygiene which, supplemented by a substantial state appropriation, will be used to build an addition to the present research facilities at Rockland State Hospital, Orangeburg.

The research program at Rockland is under the direction of Dr. Nathan Kline, and deals with the various chemical, psychological and physiological aspects of schizophrenia. With the additional space and

facilities these studies will be materially expanded.

FOUNDATIONS' FUND FOR RESEARCH IN PSYCHIATRY.—The availability of a limited number of block grants (fluid funds) for research in departments of psychiatry in medical schools and clinical facilities with established training programs is announced. Applications submitted prior to March 1, 1958 will be acted upon during 1958. A few awards may be made later to programs submitting requests by March 1, 1959.

For further information, interested departments are invited to write to the Executive Office, Foundations' Fund for Research in Psychiatry, 251 Edwards St., New Haven 11, Connecticut.

THE ALAN GREGG FUND.—The National Health Council has announced establishment of a special fund in honor of the late Dr. Alan Gregg, formerly vice-president of the Rockefeller Foundation and a valued adviser to the National Health Council.

Contributions to The Alan Gregg Fund will be used to support the Council's Health Careers program designed to help meet the acute shortage of qualified health personnel in the United States.

Dr. Gregg's "great medicine" concept called for an integrated approach to medical research, education and practice and embraced all of the supporting services essential to effective work in all 3 areas. He helped spark the Council's Health Careers Project, initiated 3 years ago, to inform young Americans about the wide variety of career opportunities in health. He joined in planning for the Commission on Health Careers recently established by the National Health Council to concern itself with the full range of health manpower problems.

Information about the Council and its Health Careers program may be obtained from: National Health Council, 1700 Broadway, New York 19, N. Y. Contributions to the Fund by individuals and corporations are deductible from taxable net income, and should be sent to the same address, marked payable to The Alan Gregg Fund, National Health Council.

WORLD MEDICAL ASSOCIATION.—At its 11th General Assembly held in Istanbul, Turkey, September 29 to October 5, 1957, the W.M.A. elected the following officers: President (1957-58) Dr. Ahmet Rasim Onat, Turkey. President-elect (1957-58) Dr. Charles Jacobsen, Denmark. Members of Council (1957-60) Dr. A. Fernandez Conde, Cuba; Dr. E. S. Hamilton, U.S.A.; Dr. L. R. Mallen, Australia; Dr. Otto Rasmussen, Denmark.

The General Assembly recorded its profound shock at the allegations brought before it with reference to recent events affecting the medical profession in Cuba, and reiterated the principles contained in its Declaration of Geneva and its Regulations governing the activities of doctors during armed conflict, namely

- that doctors must give their first consideration to the health of their patients
- that they must not allow reasons of religion, nationality, race, party politics or social standing to intervene between them and their duty to their patients
- that doctors must practise inviolable secrecy on whatever is confided in them by their patients, and
- that these principles should be recognized and observed by all governments. No doctor should ever suffer any penalty because he has rendered aid to the sick and wounded.
- The World Medical Association lends its full moral support to the doctors of Cuba in their efforts to adhere to these basic humanitarian principles
- The General Assembly directed the Council to obtain further information and if possible evidence of specific violation of these principles; draft a statement on the subject for all national medical associations and keep them informed from time to time of developments pertaining to the freedom of doctors to practise their humanitarian activities in the Republic of Cuba
- Directed the Secretary General to arrange for a committee to visit Cuba with full authority to conduct an on-the-spot investigation and directed that all information received be transmitted to the United Nations with a request that this

organization be invited to conduct its own investigations as to the allegations.

V.A. INSTITUTE IN PSYCHIATRY AND NEUROLOGY AT LITTLE ROCK.—The tenth annual Institute will be held at the VA Hospital, North Little Rock, Ark., on February 27-28, 1958.

This 10th Institute is being planned with the anniversary theme stressed throughout. It is expected that most of the individuals, who participated in the First Annual Institute on February 28 and March 1, 1949, will return for the occasion.

An attendance of 1,500 to 2,000 persons is expected representing psychiatry, neurology, related disciplines, and the general field of medicine, as well as community leaders interested in mental health. There will be a dinner Thursday evening, February 27, 1958, at the Hotel Marion in Little Rock, which is co-sponsored by the Arkansas Psychiatric Society, the local mental health societies, and the VA Hospital, North Little Rock.

REASON AND UNREASON IN PSYCHOTHERAPY.—Alexander Wolf, M.D., and Emanuel K. Schwartz, Ph.D., D.S.Sc., presented a series of three lectures on "Reason and Unreason in Psychotherapy" on October 23, 1957, October 30, 1957, and November 13, 1957, at the New York Academy of Sciences. The meetings were sponsored by the Eastern Group Psychotherapy Society and chaired by Harold S. Leopold, its president.

Drs. Wolf and Schwartz presented, in their first lecture, a historical analysis of current cultural trends toward the denial of objectivity, science and reason and the affirmation of subjectivity, unreality and unreason. They recognized the social-psychological origins of these trends but questioned the indiscriminate application to psychotherapeutic practice of these ideas from other frames of reference.

Current psychotherapeutic activity, they

pointed out, has become increasingly characterized by the invasion of nonrational values from existentialism and supra-rationalism, and spiritualistic values from parapsychology, Zen-Buddhism and Hinduism. There has been a growing emphasis in psychotherapy upon extra-sensory communication, disillusionment and despair, a fragmented view of human functioning, stressing either intellect, feeling or motility, and the misperception of pathology as the source of health.

The second lecture was devoted to a careful scrutiny of a typical American example of these ideas integrated into a system of psychotherapeutic theory and practice as found in *The Roots of Psychotherapy* by Carl A. Whitaker and Thomas P. Malone (The Blakiston Co., 1953). This work represents the growing misconception that diagnosis and etiology are of little consequence in mental illness, that training and technique are hindrances, and that the bilateral or "therapeutic psychosis" as an immunizing agent is curative. Psychotherapists working with individuals as well as groups have not escaped these influences which are seen as anti-scientific, anti-psychoanalytic and anti-reason.

The third lecture recommended a discriminating flexibility and openness to new ideas subject always to consensual validation by colleagues and investigation of therapeutic results. A more realistic and reasonable approach to psychotherapeutic activity, especially working through on a rational basis, was outlined.

The lectures will appear in a series of articles, four of which are to be published in the *American Journal of Psychotherapy* in 1958.

The Eastern Group Psychotherapy Society offered its forum for the presentation of different points of view and invited other members to represent other positions. The program of the Eastern Group Psychotherapy Society for 1957-1958 includes four professional meetings on "Sources of Conflict in Contemporary Group Psychotherapy."



LAWSON G. LOWREY, M. D

1890-1957

IN MEMORIAM

LAWSON GENTRY LOWREY, 1890-1957

With the passing of Lawson Gentry Lowrey on August 16, 1957, psychiatry lost one of its most versatile, incisive and perspicacious members. When psychiatry was largely institutional; when, except for the alienist and neurologist, it was not a field for private practice; when it was still a tolerated or un-tolerated aspect of medical education, and when research was rather dilettante in most places when its existence was claimed at all, Lowrey was carrying his psychiatry into the community, into medical education, into the problems of childhood, and into serious investigations.

Lowrey was something of a prodigy. Born in Centralia, Missouri, on December 23, 1890, he had achieved his A.B. and A.M. at the University of Missouri by 1910 when still under 20 years of age, and within a year had become an assistant professor of anatomy. A year later he was professor of anatomy at the University of Utah. He then moved to Harvard from which he received his M.D. *cum laude* in 1915. He moved progressively ahead in histology, neurological and psychiatric research and provided instruction in these fields. In 1917 he was chief medical officer of the Boston Psychopathic Hospital, one of the devotees of Dr. Southard. In 1922 he became assistant professor of psychiatry at the newly developed Iowa Psychopathic Hospital.

From Iowa he became identified with child psychiatry and directed demonstration child guidance clinics in Dallas, the Twin Cities and Cleveland for the National Committee for Mental Hygiene under the delinquency prevention program of the Commonwealth Fund. Here he was associated with many who later developed leadership in their own right—Ruth Mellor, social worker; E. K. Wickman, psychologist; Hester Crutcher, social worker, Hyman Lippman, pediatrician and psychiatrist; Grace O'Neill, psychologist; Grace Arthur, psychologist; and Oscar Markey, pediatric-psychiatrist.

All along Lowrey was challenging the current approach to behavior disorders in children consisting largely of manipulation of the environment and sought a more critically developed diagnostic and therapeutic process. He saw the behavior of the child as a product of the family in part, but complex in its causation. While he saw parents and siblings as potent forces he recognized that they were victims as well as participants in that conspiracy. It was not surprising, then, that when the Commonwealth Fund set up a succeeding research and training program, the Institute of Child Guidance, that Lawson G. Lowrey should be chosen as its head.

While at the termination of this Institute, Lowrey turned part of his attention to private practice, he never gave up the broad range of activities to which he had become accustomed. He had already served in teaching appointments in the various places to which his major work carried him after leaving Iowa, at Southern Methodist University, University of Minnesota, and Western Reserve University. Many are the students of social work at Smith College who benefited by his classes there. He authored a textbook on psychiatry for social workers. He taught also at New York University where he worked in the clinics for the gifted, at Hunter College and Columbia University. He served in various clinics in New York and on many committees in the community and in the professional associations of which he was a member. He was especially resistant always against inactive committee assignments. He was a worker. During this period he served as consultant to the staffs of the Neurological Institute, New Rochelle General Hospital, Travelers Aid, Brooklyn Hebrew Orphan's Asylum, Grasslands Hospital and the Vanderbilt Clinic. He conducted the mental hygiene research project in a kindergarten in New York for the Vocational Adjustment Bureau.

In The American Psychiatric Association

which he joined in 1919 he served many years on committees, beginning with the Legal Committee in the mid-twenties. He was a member of the Editorial Board at the time of his death. He belonged to a number of other related professional associations, *e.g.* the New York Psychiatric Society.

Lowrey was a charter member of the American Orthopsychiatric Association and its president in 1928-30. During the time that mental health matters were the subject of a special section of the National Conference of Social Work his name would appear in the annual programs of that organization

repeatedly. He was the author of many scientific and practical articles—particularly in the field of child psychiatry.

Lowrey's talents as an editor were broad. He was the editor of his fraternity's national publication. He founded the American Journal of Orthopsychiatry, established it as a journal of top quality and quietly put it on a firm financial foundation.

Lawson Lowrey was valued as a friend. He could be critical, but one always knew that adverse criticism was motivated positively and favorable criticism sincere.

GEORGE S. STEVENSON, M. D.

HOMEOSTASIS DURING PUBERTY¹FLANDERS DUNBAR, M.D., PH.D., MED. SC. D.²

ORIENTATION

The maintenance of homeostasis, a focal problem in preventive medicine, is particularly difficult during a period of developmental change. Next to infancy, when the maintenance of homeostasis is dependent almost entirely on the mother or the mother substitute, puberty is probably the period of the most rapid psychosomatic change.

During this period the developing child experiences changes in body, changes in status including appearance and clothes, possessions and range of choice, and changes in attitude toward sex and the opposite sex, all of which by necessity involve a changed child-parent relationship and changes in the rules and regulations to which the youngster is subjected.

The affective reaction to change is largely determined by the capacity to communicate. With adolescence comes a marked increase in this capacity together with a strong urge toward self-expression. Communication is a means of coping with anxiety which inevitably accompanies stress. Stress is used in Selye's (16) sense as a non-specific deviation from the normal resting state. It may be caused by function or damage and it stimulates repair. Hence, stress is part of normal living throughout the life span, but because of the nature and magnitude of the changes involved it has a peculiar quality during puberty. If adaptation is adequate, homeostatic equilibrium is maintained albeit on changing levels of function. With failure of what has been called the general adaptation syndrome, unless help is available, illness results. But along with the rapidly occurring changes just listed, there comes a change in the illness syndromes to which the adolescent is susceptible when his capacity for adaptation under stress is overtaxed.

Interestingly enough, the leading causes

of death for ages 10 to 20 are the same as those for middle age although in reverse order: accidents, cancer and cardiovascular diseases. Each of these periods of life is a period of rapid change and peculiar stress. The adolescent is concerned with finding himself sexually and vocationally, and by the time he reaches maturity he is likely to have to cope with parents concerned about losing themselves sexually and vocationally.

According to Neavles and Winokur (12) much of the peculiar quality of teenage stress rests "in a deep bisexual cleavage, which accompanies puberty, rife with intense sexual confusion." In cases where emotional rejection has been accompanied by rigid training in early childhood and infancy, it is at this age that the child, if he is capable, revolts, escapes and defies.

This rebellion, realistically successful or not, is marked by moods and rages which come and go with greater and lesser violence, essentially outside the range of conscious control or even awareness. One might expect such changes to favor susceptibility to familiar illness syndromes, but this is rarely the case. Even those adolescents with an earlier propensity for gastro-intestinal disturbances or allergy, now, when homeostasis is disturbed, are propelled into action, as it were projecting stress out to the external world. Although Mirsky and others object (correctly, I believe) to stretching the concept of homeostasis beyond internal measurable bodily processes into the area of behavior, this action springs so directly from disturbances of internal bodily processes, and its discharge serves so immediately to restore physiological equilibrium that the term is used here to emphasize a peculiar quality of action characteristic of the adolescent. He often appears catapulted into accident or delinquency.

His behavior suggests the sudden blackout of the pilot which so often leads to crashes. As Silverman and his associates (17) have pointed out, this phenomenon has its physiological basis in disturbed homeostasis within

¹ Read at the 113th Annual Meeting of The American Psychiatric Association, Chicago, Ill., May 13-17, 1957.

² Address: 1 East 69th St., New York 21, N. Y.

a closed system, adrenalin-noradrenalin imbalance, leading to inadequate pressure in the blood vessels to combat centrifugal force and gravity sufficiently to keep the brain and eyes adequately supplied with oxygen. But this occurs in the anger-in not in anger-out, people, to use Funkenstein's term, when they have been emotionally upset just prior to coming on duty. Hence, we have a disturbed homeostasis in a closed system playing a role in overt behavior.⁸

There is a general impression that the accident-prone and the delinquent have something in common. In the literature on the subject a tendency to impulsive action and difficulty with authority have been indicated as the most outstanding characteristics of the accident-prone (15) as well as of delinquents. Also mentioned are emotional poverty, defective interpersonal relationships and communication, and the "gray mood" which often accompanies the inability to learn that walling off unwanted feelings does not banish them (12).

Both impulsive behavior and difficulty with authority have their roots in early failures in communication. Nevertheless the fact is often overlooked by those who have mentioned changes of habitat and broken homes, that these failures spring not so much from parental rejection as from a feeling or the fact that the parents are out of reach.

Developmentally, the tendency to act out precedes and complements speech. Children who feel hopeless about making themselves understood tend to do something to get attention, smash something or hurt themselves, until, if no one comes to the rescue, they get the habit. Sometimes this habit disappears, but it is likely to revive at puberty and continue throughout teenage and even longer if satisfactory communication has not been established.

Accidents alone account for nearly two-thirds of teenage mortality and an even greater percentage of incapacity. They reach their peak at the age of 21, and the accident rate of 20 to 24, both industrial and non-industrial, is 24 times higher than at the age of 10 to 14, 4 times higher than at the age of

50 to 54, and 9 times higher than at the age of 60 to 64. Delinquency is similarly prominent and it is estimated that by 1965 one million of the some 25 million children in the United States age 10 to 17 will appear in court for this reason.⁴ Even at present, according to Gesell, *et al.* (3) "one million boys and girls under the age of twenty-one will commit 'crimes' serious enough to be picked up by the police."⁵ And, of course, for every one who appears in court there are several who escape detection.

CASE MATERIAL

While the information just given was being accumulated, a random sample of youngsters was under observation to obtain a more detailed picture of the threats to homeostasis and the adaptation mechanisms called into play during puberty. This paper is devoted to the vicissitudes of a group of 36 "healthy" puberal boys and girls drawn equally from public and private schools who were observed intensively during the age period 10 through 16 or longer. Information was obtained about responses to stress situations at home and at school through interviews and reports, checked by Rorschach and other tests, and then analyzed with a view to its bearing on the tendency to "act out" or become ill. By "act out" in this context is meant to give vivid, graphic expression to a conflict in action rather than to attempt to understand it by means of verbal formulation and discussion. It is not that the youngster is trying to communicate what he means in this graphic action. He is impelled by forces he does not understand to behave in a specific way.

One might take as an indication of essentially normal development the fact that these children all seemed to fit Gesell's pattern of "senescent rhythmic fluctuations" which mark the

⁴ N. Y. Times, May 6, 1957.

⁵ The criminal law of the State of New York does not consider a person 16 years of age or older an adult as a person below 16 being called *juvenile delinquents*. The group 16 through 20 is called *youthful offenders*. Recent statistics for New York State show a startling increase of delinquent acts by the younger boys, 16, 17, and 18 years of age. (Boys outnumber girls four to one.)

⁸ Note also Karl Menninger's use of ego as the homeostatic regulator (10).

advancing cycle of emotional growth between the nodal ages of 10 and 16, in which

Ten' is casual and easy-going. Eleven is sensitive and self-assertive. Twelve is outgoing and balanced. Thirteen is withdrawn and inwardized. Fourteen, expansive and exuberant. Fifteen, restless and apathetic. Sixteen, friendly and well-adjusted (3).

As one came to know them better, however, turmoil around the age of 12 became obvious, along with a sense of loneliness resulting from a feeling that this turmoil had to be concealed, and often a secret dread of becoming teenage. Gesell's (3) statement was shown to these children toward the end of the six-year period of study, and most of them called attention spontaneously to this discrepancy. It was usually during this year that, in the more disturbed, the first marked acting out occurred.

When the material derived from this study was reviewed, it appeared that these children fell naturally into 3 nearly equal groups with no significant preponderance of boys or girls in any one group: 1. Those in whom homeostasis was maintained, shifting more or less smoothly from one organizational level to the next. 2. Those with some difficulties as indicated by at least one major accident and, perhaps, somewhat pronounced lying and stealing. 3. Those with a variable accident history combined with marked delinquent tendencies.

GROUP I

In the first group there was no important history of delinquency, illness or aberration in sexual development. Social relationships and capacity for communication were good. School adjustment was easy and flexible in some level of the upper half of the class. All these children had well-focused interests outside of school to which they devoted considerable time. All played a dynamic role in group thinking whether in the forefront or backstage. They had good contact with their fathers and mothers. Their parents had good contact with each other and were essentially well adjusted in the community. If schools had been changed, it was because the family had moved, not because the child had difficulty in school.

In view of the prevalence of accidents dur-

ing this age period, it is not surprising that many children in this group reported one accident of sufficient severity to be remembered. In each instance, this accident occurred when *the relationship with a parent had been threatened*. Robbie, at age 12, fell off his bicycle and broke a wrist on his way to visit his mother who had been sent to the hospital for a major operation. Mary, at the age of 13, broke a small bone in her foot playing soccer just after her mother had had a major accident. In talking about it, she said she had been thinking of what it must be like for mother not to be able to run around because of her broken leg. This observation is included for its possible bearing on the picture presented by the next group.

In Group I, when first observed, there was no history of broken homes, but two breaks occurred during the period of study. The father of Jane, the youngest and the only girl among 9 children, died when she was 14. The home of Albert, an only child, was disrupted through divorce, but this happened only after he had gone away to school at the age of 14. The relationship to the father had been and remained outstandingly good.

The projective and other tests for this group showed a usual adolescent picture with some unwillingness to leave the fantasy world of childhood and confusion about changing bodies and the changing world. This struggle was most marked in Jane and Albert who had to cope at this time with the somewhat traumatic loss of a parent. Excerpts from their tests are included to establish a vantage point from which to view the other groups.

The report of Jane's tests taken shortly after her father's death reads as follows:

Jane wanted to be cooperative, yet she had some trouble in deciding on the relationship between the characters in the T.A.T. pictures. In contrast, however, in structured situations, she was very well able to meet the existing standards. She did less well when independent judgment and thinking problems through and arriving at conclusions unaided were demanded.

Her fantasies are benign and happy, yet their destructive effect lies in the fact that these have for her *more reality value* than her surroundings.

The motivating force in her life appears to be a wish to re-establish a father-little-girl relationship. The desire for paternal love and protection is expressed on different levels and in different forms.

At the same time, she is angry at the father and wants to hurt him.

The projective material leads to a suggestion that this girl was severely traumatized and that her withdrawal into fantasy is in part a reaction to her trauma.

Albert's tests taken during the period of separation between father and mother which preceded their divorce contains the following:

This boy made the impression of a well poised youngster. He derives pleasure from displaying his knowledge, his span of attention and concentration is superior, and the level of his performance is evenly efficient.

This youngster is an excellent thinker. He is creative and productive, and is capable of independent judgment and superior problem solving performance. His store of information is large, his memory for immediate material, excellent. His imagination is rich. His interests are many and varied.

He tries to understand himself and the world around him, which he perceives as very confusing. Nevertheless, he does not give up or withdraw from the puzzling situations, but tries to solve them to the best of his abilities.

Desiring his mother is associated for him with 1. being rejected, and 2. being completely subjugated and controlled by her as symbolized on the Rorschach by "an electronic eye which controls"—a fate which he wants to avoid.

On the unconscious level he desires to identify with his mother and to have her there. Nevertheless, for the sake of security he makes almost conscious efforts to identify with male figures holding power and positions of importance in this world.

In conclusion, the overall picture is that of a boy whose personality is developing in line with expectancy for his chronological age, with the emotional development lagging behind somewhat.

When he was tested again 3 years later, the report read as follows:

On the structured psychometric test Albert worked very efficiently and showed very superior intellectual capacities.

When necessity arises, Albert is able to deal with environmental problems. He shows a good grasp of environmental demands (6 popular responses in his Rorschach record), and he shows an ability to respect cause and logic and to use his cognitive faculties for checking purposes.

At present Albert's ability to function in the intellectual area has improved, he shows more capacity for self-discipline and for working consistently, even on those tasks which he does not like.

The tests for both boy and girl give considerable detail about the nature and intensity of their reaction to the threat to

security precipitated by the parental loss. Both made use of fantasy and showed an intensification of confusion about sex and identity but both maintained good achievement records inside and outside of school. The boy organized a club and ran the school paper. The girl became proficient in ballet and developed her scientific knowledge and laboratory skills sufficiently to qualify as a laboratory research assistant during the summers following her junior and senior years in high school. Neither showed delinquent behavior and neither suffered from an accident or illness. Both became excellent drivers and passed their driving tests as soon as the law permitted.

GROUP 2

In Group 2 there was a history of many minor and at least one major accident. In nearly all the boys and half the girls, this was combined with sexual precocity and somewhat pronounced lying and stealing. Two-thirds came from broken homes; the others from homes rife with tension and conflict.

The boys were nearly all first children and the girls, first daughters or first children. Sibling rivalry was marked. They showed little interest in intellectual values and verbalization. Actions were geared to immediate stimuli rather than long range goals. Their school performance was erratic. There was much skill but little common sense. For example, the examiner for driver's licenses said of one of them that his conscience bothered him in letting her pass, because her excellent ability to manage the car was in striking contrast with her erratic judgment.

These children were interested in the spotlight rather than in power, but were frequently bored and had no consistent hobbies. They had few friends and changed the few frequently. They tended to follow leaders by fits and starts and were poor in sports requiring teamwork. They feared illness but made light of minor injuries, physical or emotional, unless it suited their purposes to exploit them. Their accidents occurred when they felt lonely, angry or frustrated. As one of them put it, "with all roads blocked and all doors locked."

When Perry was 10 years old, his mother obtained a divorce from his father whom he greatly admired. The following is an excerpt from projective tests taken shortly after his mother's remarriage 6 months later:

This boy seems to be in a reactive depression. He has high average to superior intelligence, but is very restricted and depressed. There is a compulsive generalizing tendency which is related both to his ambitious standards and his underlying confusion. He feels that he is weak and feminine but has a strong ambition to become a conventionally achieving man.

Larry's Rorschach was also taken shortly after his mother's divorce. It showed:

Superior intellectual capacity, repressed hostility and difficulty with authority, unconscious dislike of women, good superficial relationships, but with a shrinking from emotional contact. At heart he remains a typical boy, so disturbed by his easily aroused anger that he is unable to disentangle it from the healthy need to express himself.

Nancy was not much more than 4 years old when her mother divorced her father in order to marry another man. About a year later her father was killed in an accident. The following is an excerpt from a Rorschach taken when she was 6½:

This child certainly has superior intellectual ability. She has an analytical acumen which is unusual at her age. Her restricted productivity and periodic lapses in accuracy of perception are attributable to neurotic blocking and obsessive fears.

Her active inner life is dominated by instinctive impulses, which is usual in a child; but she also has an exceptional maturity of understanding and creative reflection. Toward the outer world she is cold and unresponsive, denying all expression to her feelings and trying to withdraw from any affective contact with others. She does not love or trust any one; and she seems to be afraid to respond or express herself partly for fear of punishment, for the hostile impulses which she feels. She is not a passive, timid child basically, but rather active and stubbornly independent.

Nancy lived with her mother and alcoholic step-father until the age of 10, when her sister was born and she was sent away to school, where she had many accidents mostly in connection with athletics. The following are excerpts from tests taken when she was 14 and her mother was dying of cancer:

The projective material reveals superior intellectual potential which is not effectively utilized. On the Bellevue-Wechsler she received an I.Q. of 116, placing her in the bright normal category. There is

marked fear of direct action. She is aware of the fact that her judgment and appraisals of situations are not appropriate. She knows that she acts in accordance with impulse and distorted perception, but her ego structure is too weak to enable her to counteract this. Her main concern is to avoid unbearable tension and anxiety. To this end she uses denial and repression, but under pressure she regresses.

There is a driven, desperate quality in her personality. Her feelings of inadequacy and compensatory grandiosity are marked. She feels unhappy and lonely, as she expresses it, "thoroughly lonely, no one I can really call. . . ." Feelings of internal emptiness lead her to assume different roles, always play acting without too much emotional investment.

In the projective tests for this group, the following points are prominent: 1. Compulsion with indications of hysteria. 2. Weakness with doubts about becoming real men and women. 3. Loneliness with shrinking from emotional contact. 4. Tendency to play act. It may be noted that children whose families are undemonstrative often become exhibitionistic.

GROUP 3

Children in Group 3, like those in Group 2, had a high record for accidents, but few major accidents. The delinquent tendency was marked in half of them and there were several arrests although only one was "locked up." In the other cases, usually a relative succeeded in obtaining a release. In the remaining half there was frequent truancy from school, and, in a few, absence "because of sickness" or disturbances so great that psychiatric help was required.

The majority of those with high accident and delinquent records came from broken homes or from homes in which one parent was trying to "stick it out" with a spouse who was incapable of playing the role of parent because of illness, absence or severe mental illness. All had a feeling their parents were out of reach. Their outside interests were scattered and unfocused. All had difficulty with verbal communication and in establishing friendships, with, at times, a tendency to withdraw into apathy. Over half had poor grades despite good intelligence ratings, often because of markedly defective reading, writing, or spelling.

Although the children in Group 2 were

still able to enjoy sports, particularly where teamwork is not required, those in Group 3 felt such activity to be another threat. Pain was associated with interpersonal relationships and gradually nobody could be trusted. As one of this group put it, "The reason I see less and less of the gang is because Jimmy was not safe to steal with."

When Sam's father married, he moved into the home of his bride to share her life of subservience to her father and mother and their cultural standards which differed markedly from his own. Sam was born into an atmosphere of turmoil, in which no one seemed to approve of any one else or to develop sufficient tolerance to be able to express affection. When he was 7, a sister was born and the family moved into a home of their own, but the conflict continued, and Sam developed a hatred for the girl who stole from him the very meager affection and attention that he had had before. He became boastful, exhibitionistic, and reverted to bed wetting. At 10 he was well launched in a career of lying, stealing and cheating, for it was his only way of getting the things he felt it was his right to have. If his father punished him by giving him only enough money to buy a glass of milk for lunch, the boy saw to it that he had a hamburger like the others. Gradually he became impervious to any type of punishment, but he seemed to be always hurting himself and others, and getting hurt. When he had an accident, it was usually because he got caught in a trap he had set off for some one else. Gradually he withdrew from competitive sports and all association with other boys. But he became proficient in tormenting his sister and her friends and as he grew older such relations as he had with girls followed a pattern of hostile seduction.

The following is an excerpt from his projective tests:

This youngster appears to be at present in a state of acute turmoil. He desperately tries to present himself as an adequate and efficient boy, yet beneath this facade is an infantile, agitated and poorly integrated personality.

In unstructured situations (as exemplified by projective tests) his performance is inferior, he does not integrate his ideation with reality demands, and he allows his ideation to flow unchecked. Thinking disturbance, characterized by flight of ideas, overconcreteness, drawing of unjustified inferences and autistic thinking, is in evidence.

While he is afraid of his impulses overrunning his ego, and feels victimized and helpless in the face of these, there is also a feeling of elation and release of tension connected with the setting of powerful forces into motion.

His concept of people is confused; his world is populated by "killers and traitors, smashed people with blood dripping," and "Boy kills himself after he has lost the stolen money."

This youngster painfully experiences his precarious balance. His self-image is that of "insane killer, devil, angel of death." Oral and anal fixations have been poorly resolved. Sado-masochistic pattern is pronounced.

David's mother, a Catholic, had been forced to give up her religion in order to marry David's Jewish father. Although she maintained appearances and represented herself as Jewish, David insisted that she was living a lie and he could have no respect for her. He was sure his father thought so too, but at the same time blamed his father for requiring this of her. He was sure they hated each other and thought that if they admitted it and got a divorce his own life would be happier. He shared this secret with no one until his school principal tried to find out the reason for his social and academic failures. She then "told on him" to his parents, as she had promised not to do and, from that time forth, he decided that people were all bad and rules were no good and that the only thing that was left was to learn to get what he wanted without getting caught. This he did so successfully that his school record improved considerably, and it was not until he was 16 that he was discovered in a "crime" of sufficient seriousness for him to be expelled from school. In the meantime, he joined his parents in making the life of his only sibling intolerable. Incidentally, the younger brother developed a stubborn case of ulcerative colitis.

In David's projective tests there is the following passage:

The boy tries to impress others by his unusual and deviant reactions. Basically, he feels very inadequate and unable to function in a satisfactory manner. He is not capable of adaptive emotional reactions, and when he attempts these his controls and understanding are not adequate. He fears close environment does not provide him with stability; he sees the crucial people as explosive and hostile—"Fighting, blood running, coming out of their noses. . . ." He is fearful of others—"rabbit running away"—and he is fearful of expressing his

aggressive potential towards people. Thus his relationships with people are few, and these are characterized by a spurious quality. He seems to want to give an abundance of wrong and unnecessary replies. He does not seek communication with others, but he wants their admiration.

There is much unintegrated impulsivity at the core of this personality. When the ego finally relinquishes its controls and is overrun by his impulses, there is a sense of elation and release.

When Caroline was 8 her mother divorced her father who maintained custody of her one sibling, an older brother whom she had always hated. Both children had been exposed from early age to scenes of violence between their parents, but the parents were unaware of this fact because these episodes always took place after the children were in bed. In the eyes of the world they had always kept up appearances, and even their friends were unaware of the domestic discord. Caroline had many minor accidents. These usually occurred after she had made a superhuman effort to keep her temper. These increased in seriousness and frequency as she approached teenage. She did a good deal of lying, stealing and cheating, and frequently got sick when she was in such hot water that she thought it would be risky to go back to school. She had a reading difficulty which served to keep her teachers' interest focused on helping her to keep up with her class, so that much of her aberrant behavior was passed over.

Caroline's mother, however, became sufficiently worried about her reading difficulty to consult a psychiatrist who suggested that the girl might be helped were her mother to have psychiatric treatment. The following excerpt is from Caroline's projective test taken at the psychiatrist's suggestion when she was not quite 10:

This is a well endowed but seriously disturbed child whose defenses are not adequate and who finds it very difficult to achieve any sense of security.

Her motor coordination is not good. There are shifts from superior motor performance to an inferior one, the general level being below that expected for her chronological age and intellectual development. She is unable to develop any sort of stable, integrated self-concept and to establish meaningful emotional and interpersonal relationships. She makes an effort to relate emotionally to the environment, but these attempts have a strained and artificial undertone.

Caroline's attitude in relation to loss of control

is ambivalent. It is perceived by her as a welcome relief from tension, but the concomittant guilt and fear of loss of environmental approval lead her to the anticipation of destruction both from without and within should she lose control. The manifested excitement appears to be primarily of a sexual nature. Caroline's pre-occupation with sexual matters and sexual curiosity considerably exceed those expected for her chronological group.

Caroline improved during the next 3 years and recovered from her reading difficulty, but became such a behavior problem that the school refused to re-enroll her unless she had psychotherapy. The girl made many "impulsive" errors but the projective tests taken at this time showed improvement. An excerpt follows:

As the previous Rorschach indicated, this is still an "introversive" child, a youngster who has turned away from the depriving environment to seek satisfaction within herself. Her fantasies are frightening and charged with aggressive feeling, so that one gets the impression of a rather rootless child, without a feeling of belongingness and without a firm anchorage for herself in the environment. Caroline sees the outside world as dangerous. She seems painfully lonely and sometimes she becomes overwhelmed by sadness and emptiness within.

She maintains herself fairly effectively but as the tensions mount and there is an increasing crescendo of excitement, her primitive self image becomes evident. It seems related to the lack of lasting object relationships and her overwhelming sense of loneliness. The child's impulsivity may be one way of downing the inner depression, but she does show an awareness that indiscriminate responsiveness may lead her into difficulties.

The conflicts about voyeuristic and exhibitionistic problems described in the previous report are largely missing from the current findings. This child is still sexually confused and has considerable concern about her identification and yet she seems to have obtained some reassurance in this connection.

It is not surprising that reading and writing disability, which is essentially a symptom of ego disability, is a frequent finding in this group(1). With Caroline there was the specific fact that her hated older brother often read her insulting notes written by their father to their mother which were usually left under the telephone beside her bed.

With Wallace, whose story follows, there was the added fact that his psychotic mother, who exposed him to scenes of violence by physically attacking his father and occasionally injuring him by the things she threw, pretended that she could not read her hus-

band's writing, although she was otherwise able to read. But, of course, this is not the complete picture. In these adolescents, the ego was settling for a lower level of organization and communication, not to get out of danger but to preserve itself from intolerable pressure.

Wallace, who had taken remedial writing for some time, managed to break first the left wrist, then the right wrist, then fingers on one hand, then on the other. In addition, he broke an arm, a leg and his nose. His grades went steadily down and he lost all interest and sense of goal. Excerpts from his projective test taken at the age of 14 read as follows:

The development of this boy has not proceeded harmoniously. While the healthy strivings are strong, and the boy tries to present himself as a very acceptable and conventional person, the underlying structure is poorly organized and infantile. The core of the personality appears to be less healthy than a superficial integration would lead one to believe. This structure was revealed by the discrepancy of this boy's performance on the tests tapping different layers of his personality.

On the drawing test, which tapped the deepest layers, he showed the most pathology, primitivization and poor ability to maintain control. On the Rorschach test there was relatively less pathology and greater efficiency of defenses. On the T.A.T. (preconscious material), he was able to give integrated productions and to present himself as relatively mature and competent.

His ego is unable to deal effectively with the instinctual realm of his personality, and while it is in good contact with external reality, it is estranged from his instinctual drives.

He experiences these instinctual drives as uncontrollable forces working upon him. In particular, the boy is fearful to express his hostile drives. He feels that "if he will get mad he will be beaten up and left in a corner." Yet, he seeks deviant ways of expressing his destructive drives "contemplating how to bust the violin he hates, and not to get into any trouble; afraid to try it because he knows he will be beaten up, but maybe he can find a sneaky way to do it."

The most pronounced fear is that of violence. The boy frequently mentions violent attacks, raising the possibility that he was once traumatized, and that the traumas were experienced as unusually painful. At present, he experiences himself as "mangled and hurt" "made into a mess," and therefore unable to function without support.

For him there is no real identification with the aggressor, projection, displacement, expression of anger in a socially acceptable pattern. Potential for speech breaks in control is in evidence.

Wallace shifted more and more to lying, stealing and cheating until finally, at the age of 16, he overturned in a stolen car. The girl friend, who was with him, was killed but he escaped uninjured.

It is clear from the projective tests in these adolescents that the ego boundaries were poorly maintained, especially in unstructured situations. All were markedly infantile with a propensity for disorganization, and all reported a feeling of elation after giving in to impulses. To them, as one boy put it, the world seemed populated with "killers and traitors." Outstanding in their reports was association of closeness with pain.

In stress situations which it seems impossible to change and from which there appears to be no escape, a child may resort to fantasy. But young children have a limited fantasy range: 1. They can "kill" mother, father, nurse, but then they would have no dinner, no bed, no love and so this fantasy is rejected for survival rather than for moral reasons. Another way of coping with the situation is to run away; but then where can one get food, shelter or love? 2. They can think, "I'll kill myself and you'll be sorry when I'm dead." But the young child has to be very sick to do more than dramatize this fantasy. 3. As a last resort the young and unhappy child becomes *very sick* without dying—so sick that he gets attention from his parents, his siblings and perhaps the community, trying to make up for the love and attention he has missed.

Adolescents involved in this conflict encounter a new hazard. They can effect what they have fantasied. The idea of "killing" no longer is the childish one of eliminating or erasing for a moment. It is a final thing, too frightening to picture. Killing one's self is no longer a matter of just going quietly to sleep, or disappearing for a moment. Getting very sick is not the most satisfactory way of getting attention.

The first alternatives being truly horrible because they are possible, must be avoided. Being sick only cuts the youngster off in greater helplessness, and frightening helplessness. The ego must bend all effort toward securing guilt-free and anxiety-free release

and gratification, by-pass thought and dupe super-ego. In this way children become unable to feel what they feel, and see what they see, and that is what makes them difficult.

Sometimes children act out their fantasies in physiological or behavioral disorders, but more often they act them out by having accidents in which they actually do kill others or themselves. To return to the statistics cited at the beginning of this section, more teenagers are killed as the result of accidents than by anything else. Accidents kill 4 times as many teenagers as do the next 2 leading causes of mortality put together, and it should be remembered that after them come homicide and suicide. In most cases the accident is the result of the behavior of the teenager himself.

COMMENT

This study material was truly the result of chance. It was not selected at random for a particular purpose. The core was a group of children who attended a nursery school in New York from the ages of 1 to 3 years and then scattered. It was only after they had reached the age of 10 that they, together with those children to whom they had become attached, became the subjects of this study.

At the outset, during the nursery school years, there were no broken homes, but a surprising number of breaks occurred during the subsequent period. This gave a somewhat unique range for the limited number of subjects. During the 6 years of close observation, no more than two children were attending the same school and the educational experience of the group as a whole had covered 120 educational institutions, urban and suburban, in Palm Beach, Chicago, Boston, St. Louis, Philadelphia, Concord, N. H., as well as New York.

In this presentation it may appear that disproportionate space has been given to test material in preference to case history and interview material. The reason for this choice is that when one hears similar statements from one child after another one may wonder whether the interviewer has not simply chosen to hear and set down material that fits a pattern with which he has been

impressed. Finding the same repeated emphasis in the reports of projective tests given by different individuals in different towns, connected with different schools, by-passes this possible bias.

Almost two-thirds of the children in Groups 2 and 3 had experienced some kind of family disruption. In a third of the children in these groups, communication with the mother was poor and it was weak with fathers in almost all cases. This would tend to confirm some of the suggestions made by Rubenstein and Levitt (14) about the role of fathers in families. Poor communication was indicated by an ordinary lack of interest on the part of these parents, or, in some cases, just haranguing without attention to the child's response. In Group 3, however, there was considerably more violence in the homes. Physical assaults by these parents on each other and/or the children were frequent.

The position within the family may or may not bear a relationship to the group distribution of the children. Five of the 7 "only children" were in Group 1 while Groups 2 and 3 contained only one "only child" each. The boys and girls in Group 2 were first children or first of their sex. Among the girls in Group 3, 4 had older brothers, but among the boys of this group, no unique family position was discernable.

All of these groups were subject to the pressures common for their age, but in Groups 2 and 3 the impact of the inevitable changes in status, possessions and household and community rules was amplified by actual changes in the family constellation and habitat. Changes in school, whether as a result of a new marriage or of the child's already poor adjustment, served as a further threat to homeostasis on which healthy maturation depends. Unable to compensate, these children tended to lose any sense of identity they may have had and to disintegrate. In spite of their fear of being overwhelmed, they experienced a sensation of elation and relief after they had given in to impulse.

Although insight is difficult of achievement for all who are impelled to act out rather than to remember and work out, it is particularly difficult for the delinquent, who not only finds communication difficult but fears it to the extent of total abhorrence.

Insight means the elimination of the affect barrier which serves as a defense against feeling and seeing. Nevertheless, those of this group who sought help were essentially free from their difficulties by the time they were 16. The symptoms of the others have been aggravated.

SUMMARY

A study has been made of 36 children during the age period 10 to 16. The children fell into 3 groups: 1. those displaying no symptoms of accident proneness or delinquency, 2. those with a major accident history, but displaying only minor tendencies toward delinquency, 3. those with marked delinquent behavior patterns. The family relationships, adjustment to change and frequency of change, school records and material provided by projective tests differed from one group to another. Some of the differences have been noted. It has been shown that:

1. Relief of tension in ill-considered motor activity is a frequent means of restoring physical and emotional equilibrium among puberal boys and girls whose capacity to respond to change has been overtaxed by the addition of complex external changes to the stress that is inevitable during this maturational period.

2. When inner resources and capacity to communicate have been restricted, as indicated in school and social records, projective tests and interviews, many adolescents become accident prone or delinquent. Exposure to overt manifestations of violence in their early relation with adults appears to favor the delinquent pattern.

3. Even when action has been used to

block or substitute for memory and insight, psychotherapy may be effective especially if it can be inaugurated early.

4. The establishment of a steady, dynamic relationship with an adult is imperative. For such children to be alone is dangerous.

BIBLIOGRAPHY

1. Fabian, A. A.: *Am. J. Orthopsychiat.*, **25**: 319, April 1955.
2. Funkenstein, D. H.: *Psychosom. Med.*, **12**: 6, 377, 1950.
3. Gesell, A., Ilg, F. L., and Ames, L. B.: *Youth, the Years From Ten to Sixteen*, New York: Harper Brothers, 1956.
4. Gesell, A.: *J. of Am. Med. Assoc.*, **90**: 840, 1928.
5. Hoffer, W., *et al.*: *The Psychoanalytic Study of the Child*, vol. VI. New York: Internat. Univ. Press.
6. Holmes and Ripley: *Am. J. Psychiat.*, **3**: 11, 921, 1955.
7. Kanner, L.: *Child Psychology*, 2nd Edition, Springfield, Ill.: C. C Thomas, 1948.
8. Kennard, N. A.: Myelination of the Central Nervous System in Relation to Function, in: *Problems of Early Infancy*, New York: Josiah Macy Jr. Foundation, 1949.
9. Masserman, J. H.: *Progress in Psychotherapy*, New York: Grune & Stratton, 1957.
10. Menninger, K.: *Internat. J. Psychoanalysis*, **35**: 412, 1954.
11. Mirsky, I.: *Proceedings of Amer. Assoc. for Advancement of Science*, 1956.
12. Newnes, J., and Winokur, G.: *Bull. Menninger Clin.*, **21**: 28, Jan. 1957.
13. Redl and Wineman: *The Aggressive Child*, New York: The Free Press, 1957.
14. Rubenstein, B. O., and Leavitt, M.: *Bull. Menninger Clin.*, **21**: 16, Jan. 1957.
15. Schulzinger, M. S.: *Accident Syndrome*, Springfield, Ill.: C. C Thomas, 1956.
16. Selye, H.: *Stress of Life*, New York: Blakiston Co., 1956.
17. Silverman, A. J., Cohen, S. D., and Zuidema, G. D.: *Am. J. Psychiat.*, **113**: 691, February 1957.

PHARMACOLOGICAL AND BIOLOGICAL PSYCHOTHERAPY^{1, 2}

ROBERT G. HEATH, M.D.,³ BYRON E. LEACH, Ph.D., LAWRENCE W. BYERS, Ph.D.,
STEN MARTENS, M.D.,⁴ AND CHARLES A. FEIGLEY, M.D.

The material we present is concerned with our current efforts to understand the disease, schizophrenia, and to evolve a specific treatment. Since our concept of schizophrenia is not a universally accepted one we shall first briefly outline our ideas on the nature of this disease and then present some findings which have helped us to formulate our particular hypothesis. With this background we then discuss the logic of some therapeutic efforts we have begun in a preliminary way in an attempt to remedy the disorder.

We consider schizophrenia as a genetically determined metabolic disease. We feel that the psychodynamic observations can be understood only if considered within the framework of physiology and chemistry. The clinical picture has been described in this frame of reference by Rado and associates⁽¹⁾ under the heading of schizotypal organization. With this approach, the clinical symptomatology is considered in the context of a basic biological deficiency. Behaviorally, the fundamental manifestation is a lack of pleasure drive or, to quote Rado, "an integrative pleasure deficiency and a proprioceptive diathesis." It is from this fundamental manifestation of the disorder that symptoms of basic schizophrenia, as described by Bleuler⁽²⁾, and in some instances secondary symptoms of classical textbook schizophrenia, evolve. The clinical picture has been elaborated in considerable detail principally by Rado⁽¹⁾ and Hoch⁽³⁾ as well as ourselves in other articles⁽⁴⁾. As it is our purpose to discuss primarily our biological findings we do not elaborate further on symptomatology. However, it does seem pertinent to emphasize that when one considers behavioral disorders

in the light of the concept of a schizotypal organization and adaptation, schizophrenia is an extremely widespread disease. A careful screening for symptoms of this disorder reveals that the overwhelming majority of patients reporting to the psychiatrist for treatment are probably suffering to some degree from this disease. However, as long as clinical evaluation and projective testing are our only means of determining the presence of a schizotypal defect, the collection of accurate statistics will be impossible. The frequency of the disease will not be determined accurately until we understand its specific biological nature so that meaningful measures can be devised. In the Tulane training program, where psychoanalytic training is incorporated with residency training we conduct careful clinical and psychological evaluation of applicants to the outpatient intensive treatment clinic to screen out those with a schizotypal deficiency. We feel that psychoanalytic treatment is contraindicated in schizotypes. Any type of intensive treatment must be considerably modified to take into account the fact that maladaptive behavior is not a result of the same factors as those at play with the true neurotic or normal individual. The behavioral deficiency in schizophrenics is not due primarily to faulty learning and therefore cannot be fundamentally altered by the re-learning process of psychotherapy. It follows then that in schizophrenia any type of psychotherapy, because it cannot remedy the basic defect, is at best palliative. Psychotherapy, which provides a leaning post for the patient, can help him to meet life situations, which he is incapable of doing because of his deficiency. It thereby relieves stress and prevents emergency dyscontrol which the schizophrenic is prone to develop. In our formulation, the basic deficiency is such that emergency behavior results in increased symptom formation; i.e., plays a role similar to dietary indiscretion in the metabolic disease, diabetes. By the same reasoning, intensive therapy or conventional psychoanalytic therapy which might increase

¹ Read at the 113th Annual Meeting of The American Psychiatric Association, Chicago, Ill., May 13-17, 1957.

² Supported by grant-in aid from The Commonwealth Fund.

³ Dept. of Psych. and Neurol., Tulane Univ. School of Med., New Orleans 12, La.

⁴ Special Foreign Fellow—The Commonwealth Fund.

stress can, and often does, precipitate overt behavioral decompensation. Even with our best screening techniques, many pseudo-schizophrenics or patients with mild schizotypal defects are missed. Our clinic population is of a high socio-intellectual level including predominantly students, faculty and professional persons. Yet, a survey of the last 100 patients screened for admission to this special clinic for intensive outpatient psychotherapy reveals that the majority were diagnosed at intake as schizophrenic. This figure increased considerably for this group after a period of trial therapy. Therefore, utilizing our clinical diagnostic criteria, about 75% of the patients in this representative group referred to the clinic as neurotics for intensive therapy are suffering from schizotypal disorder detectable by clinical criteria alone.

From this brief discussion of our clinical concept of schizophrenia it is apparent that with our present operational concept we feel the majority of persons with decompensating behavioral disorders, whether labeled conventionally as psychotic or neurotic (exclusive of those with cellular damage to the brain), are suffering from a common disease process. We extend our concept of schizophrenia to cover this entire group. Our approach to the disease is that it is primarily a metabolic disorder existing to varying degrees from a very minor deficiency in the so-called mild schizotypes up to a marked deficiency in the chronic overt psychotics. Stress, in our present formulation, is a secondary factor contributing to intensification of symptoms. Because of the primary deficiency, there seems to be a faulty breakdown of the hormones associated with the stress reaction. We postulate that the faulty breakdown products alter brain physiology, thereby accounting for the presenting symptoms.

This sketchy theoretical formulation of our current ideas of the nature of the disease process, which emphasizes the biological aspect, is based on data collected from several studies (6, 7, 8, 9, 10), some of which have been previously reported.

PHYSIOLOGICAL STUDIES

As presented in earlier publications (6, 7, 8, 9, 10), we have implanted small electrodes

through a large number of subcortical nuclear masses as well as over the cortex of the brain of schizophrenic patients on 51 occasions. Similar procedures have been carried out on 6 nonpsychotic humans. The schizophrenic subjects consistently have shown a spike and slow wave recording abnormality through the septal region, rostral hippocampus and amygdaloid but in no other region from which we have recorded. Nonpsychotics have not had this finding. The data suggest this is a characteristic finding in persons displaying psychotic behavior. This irregularity varies in intensity with the clinical state of the patient, being more marked when the patient is more disorganized. Recording abnormalities from this region are not associated exclusively with schizophrenia. They are present with psychotics when the disordered behavior is brought about by other means as, for example, when psychotic symptoms are induced by administration of psychosomimetic drugs and in conjunction with episodic behavioral disorders of epilepsy. These observations suggest that this altered physiology is related to psychotic behavior. They also suggest that it is not a fundamental disturbance in endogenous schizophrenia but rather a reflection of the intensity of the complications resulting from the basic metabolic disorder. We shall refer to this again after presenting more data which suggest the nature of the complicating factors in the basic metabolic disorder.

We previously reported (5) the results of therapeutic efforts in schizophrenic patients through electrical stimulation of this region. Stimulation to the septal region consistently produced temporary improvement in behavior in our patient group. Many rapidly relapsed; others held their gains for prolonged periods; some have remained in at least a partially remitted state for several years. However, after a follow-up period up to 7 years, we do not feel that the therapeutic gain has been sufficient to make specific subcortical electrical stimulation as a recommended therapeutic procedure. On the other hand, the biochemical changes, as well as the clinical changes, temporarily induced by this procedure have suggested other therapeutic approaches which we have explored and shall report. Stimulation, with temporary clinical improvement, consistently produced altera-

tions in the rate at which patients' serum oxidized adrenaline(6, 7). It also produced changes in steroid metabolism(13, 14). This was the principal finding that prompted us to test the therapeutic effects of the administration of extracts of the septal region of cattle brain in schizophrenic patients.

STUDIES WITH TARAXEIN

During investigation of oxidizing enzymes in serum of schizophrenics and normals(6, 7), suggestive findings were noted which led to the isolation of taraxein. More specifically, it was while isolating the known oxidase, ceruloplasmin, that qualitative differences were noted between activity of normal and schizophrenic serum. Processing methods were then developed for extracting, in purer form, the taraxein fraction. Reports(9, 10) of clinical effects resulting from intravenous administration of this substance have been presented. A report of later studies with this substance will be presented in the JOURNAL (15). Our present operational concept is that taraxein represents a difference or defect in the oxidizing enzyme system. This oxidizing enzyme system, including ceruloplasmin and taraxein, in our studies has acted on epinephrine and related substances. We have looked further for defects in metabolism of these substances.

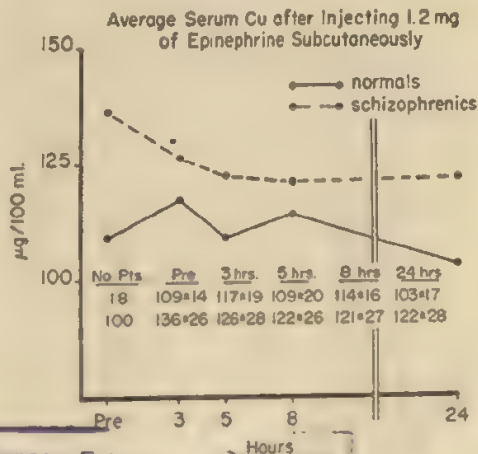
URINARY EXCRETION OF CATECHOLAMINES

The finding of differences between normal subjects and schizophrenics in excretion of catecholamines and possibly related compounds in the urine lends further support to our hypothesis that the metabolic deficiency in schizophrenia is in the area of amine metabolism. Sulkowitch(16) recently described a new method for determining catecholamines in urine. Later Sulkowitch and Altschule(17) reported the presence of strikingly larger amounts of catecholamines, i.e., epinephrine, norepinephrine and other related substances, in the urines of schizophrenics than in normals. In our studies employing modifications of the method described by Sulkowitch, the findings in general have tended to support his conclusions. We also have found suggestive evidence that after subcutaneous injection of epinephrine much higher quantities of catecholamines are

recoverable in the urine of schizophrenics than in the urine of normals. These findings are preliminary and have been obtained on only a small series of subjects but suggest that amine metabolism is somewhat altered in schizophrenics.

SERUM COPPER AND CERULOPLASMIN LEVELS

In an effort to explore further the relationship of serum oxidizing enzyme systems to catecholamine excretion and the meaning of these findings in relation to schizophrenic behavior, we have conducted two studies. Since 93% to 96% of the copper in serum is in the form of the copper globulin oxidase, ceruloplasmin, the copper levels give a rather true indication of the amount of ceruloplasmin present. One study consisted of determining fluctuations in copper levels with the administration of subcutaneous epinephrine in a series of schizophrenic patients and normal controls. Over a period of time we had noted consistently that chronic schizophrenics develop a strikingly milder response to epinephrine than do normals. They do not develop physiological changes to the same intensity nor are the subjective symptoms as marked. Frequently, in severe schizophrenics there is no detectable response. This suggests that schizophrenics somehow are unable to utilize epinephrine in the same manner as normals. Differences in copper response to the subcutaneous administration of epinephrine, however, were minor and inconsistent between the normal group and schizophrenic patients. Figure 1 demon-



Bureau Edn.

DAVID HA

Dated.....

strates the findings in the group tested. There was no consistency in regard to increase or decrease in copper but average values at 3 and 12 hours were different. The second study was concerned with the correlation between ceruloplasmin levels and the clinical course of schizophrenic patients admitted to our Charity Hospital service. Determinations were made on 34 schizophrenics who were followed for 6 weeks to 4 months. In this small group there appears to be some correlation between higher ceruloplasmin levels and higher remission rate. Those who spontaneously remitted, generally had the highest copper levels (average 238; range 198 to 280) whereas those who failed to respond rapidly to treatment generally had lower copper levels. This suggests that the ceruloplasmin response might be an adaptive mechanism in the disease, schizophrenia—more specifically, that in those patients who are capable of producing increased amounts of the oxidizing enzyme, the prognosis is more favorable. Figure 2 shows our findings

on this study. We also have found that often as psychotic patients with high ceruloplasmin levels begin to improve clinically, their ceruloplasmin levels drop very rapidly. It thus seems that the ceruloplasmin response might be an important part of the mechanism for counteracting the psychotic process.

We do not think the serum copper studies are by any means definitive. On all the studies, there is considerable overlap between the schizophrenic and normal groups. We feel there are definite indications of a disturbance in the metabolism of catecholamines and this particular enzyme system is involved. However, the metabolism of adrenaline and related catecholamines is not thoroughly understood. They are oxidized by amine oxidase in tissues. Conjugation by the liver is another mechanism and it appears that the metabolism through serum oxidase is also a route of breakdown. We found some suggestive differences in the serum oxidase system. It may be that other routes of metabolism are similarly interfered with in schizophrenia. We do not have this information as yet.

The working hypothesis we have formulated for schizophrenia from these data is as follows. A deficiency exists in the area of amine metabolism. There is apparently a qualitative difference in the serum oxidase which makes for a faulty breakdown of the catecholamines. The degree of impairment of this system varies considerably from patient to patient. When it is more impaired, the prognosis for remission is poorer and the adaptive behavioral patterns more disorganized. We tentatively feel, from our data, that this is an extremely widespread disease and the presence of the phenomenon in a mild degree probably accounts for many or most of the disordered behavioral patterns conventionally diagnosed as neurotic or character disorder. We feel that symptoms of psychotic behavior appear because the products of faulty amine metabolism have a propensity for affecting specific regions of the brain. In our formulation, psychodynamic factors are of secondary importance. Stress is associated with outpouring of catecholamines and thereby can be important in the formation of secondary symptoms. However, because of behavioral patterns evolving as a result of the metabolic deficiency, the genesis of stress is quite otherwise than in

Cu Levels and Clinical Course

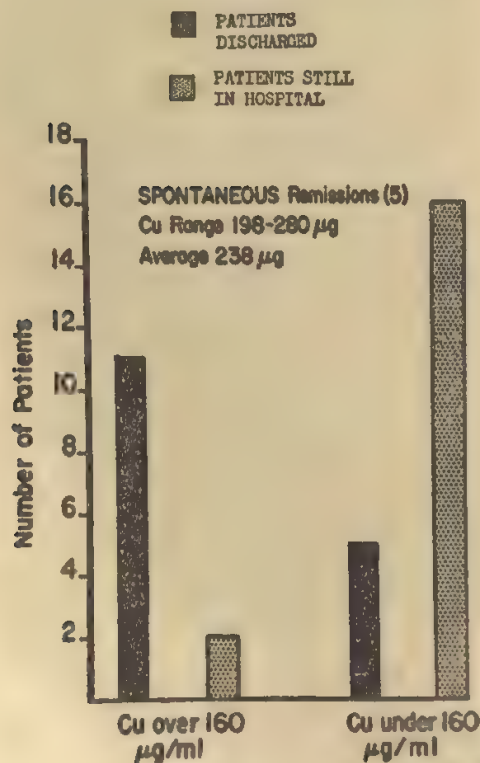


FIG. 2

psychotics and cannot be understood by traditional psychodynamic reasoning.

ATTEMPTS AT CORRECTIVE THERAPY

Within this formulation based on our findings, we have attempted to develop a biological therapy for schizophrenia. The procedures are based on our assumption that a deficiency exists specifically in the area of amine metabolism, probably with aromatic amines. One approach has been to administer to schizophrenics the copper oxidase, ceruloplasmin, extracted from serum of non-psychotic subjects. The second approach consists of administering a specially prepared extract of the septal region of cattle brain.

Our rationale for administering the ceruloplasmin was that if the serum oxidizing enzyme system was defective in the schizophrenic, then replacement with large amounts of the oxidase from normals might correct the faulty process temporarily. Hypothetically then, the amines would be broken down in the proper manner without formation of faulty or toxic by-products. Extracting ceruloplasmin from serum has proved to be a

difficult procedure. With the Holmlberg and Laurel method (18), we obtained only a 10% to 20% yield. When we employed other methods of processing, the molecule was disturbed so that although there were larger yields of copper, the actual copper globulin yield was smaller. When administering the ceruloplasmin to patients, it was given rapidly intravenously, the copper levels being followed before and at varying periods after. We have found that the levels remain elevated for a fairly prolonged period. The fall off is gradual and the half life of the administered ceruloplasmin is approximately 5 days. We have been able approximately to double the serum ceruloplasmin level in 4 patients. In each instance there was a change in our indicators of adrenaline metabolism both clinically and physiologically. After administration of ceruloplasmin, the patients clinically would respond to the hypodermic administration of epinephrine much more like the normal group. Physiological response, too, was much more dramatic (figure 3).

We have been testing the effects of septal extract for approximately 2 years. Trial with patients was instituted only after exhaustive

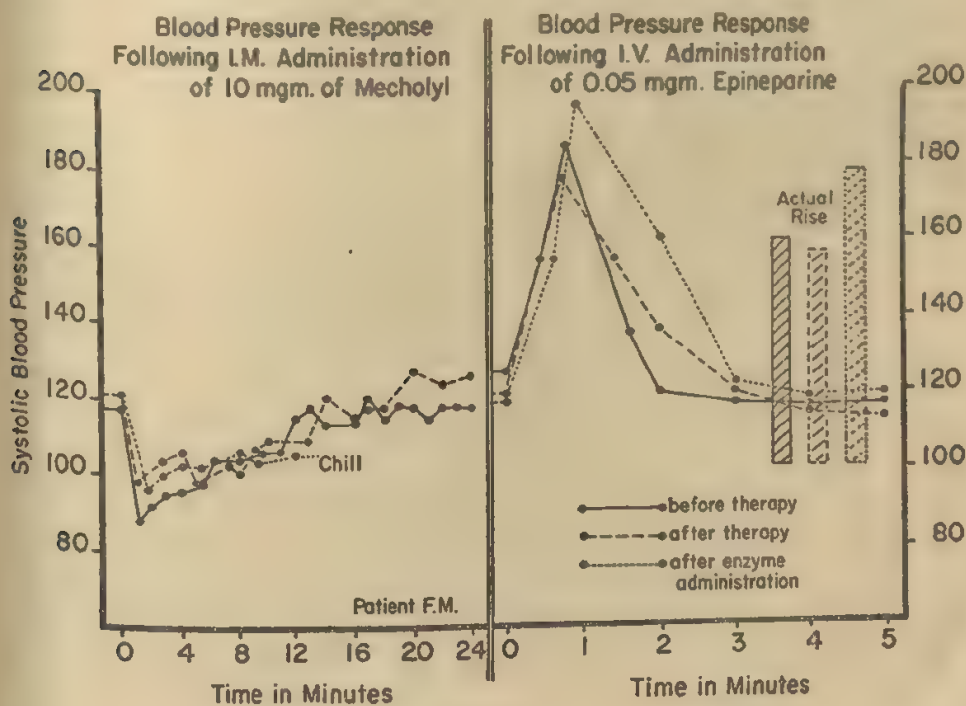


FIG. 3

testing for safety was conducted in animals. The septal tissue is digested to reduce it to a polypeptide. Testing included potentiation of the extracts by the method of Kabat and Wolf(19). Whole brain potentiated in this manner brought down 75% of our monkeys with demyelinating disease whereas there was no apparent antibody reaction with the potentiated extract. Patients receiving the extract for fairly long periods have not developed antibodies to it.

Several findings led us to reason that the septal region of the brain might be releasing a humoral substance. Large lesions that completely destroyed this area in animals affected electrolyte and steroid metabolism. Stimulation resulted in a change in steroid metabolism in the opposite direction(13, 14). Most important in the context of our most recent formulation was that stimulation, while alerting the psychotic patient and often lessening his psychotic symptomatology, resulted in a prompt reduction in the speed with which his serum oxidized adrenaline *in vitro*. We have not obtained this result with stimulation of several other deep regions of the brain. Figures 4 and 5 show changes in copper levels with stimulation of various structures in a series of monkeys and human patients. Adrenaline oxidation is related to copper levels—the speed being greater in direct proportion to the amount of copper present. Our decision to manufacture extracts was based on Altschule's studies(20) with the pineal gland. He reported that the administration of especially prepared extracts low-

FIGURE 5
PER 100 MILLILITERS OF SERUM IN PATIENTS
BEFORE AND AFTER SUBCORTICAL STIMULATION

STRUCTURE STIMULATED	PRE	1 HOUR	1 HOUR	24 HOURS
Septal	133	122	118	94
Septal	277	255	156	285
Septal	168	133	111	147
Septal	157	-	112	110
Rt. Hippocampus	127	167	-	174
Rt. Hippocampus to Rt. Amygdaloid	130	129	113	110
Left Amygdaloid to Left Hippocampus	115	120	118	115

FIG. 5

ered the levels of reduced glutathione in psychotic patients. Our method of preparing the extract was modified from Altschule's procedure. Many difficulties have been encountered in preparation of the extract and it has varied considerably in activity.

We have tested the septal extract against taraxein effects in two monkeys. The taraxein was first administered intravenously. When the monkey began to develop clear-cut symptoms resembling those seen in psychotic patients (usually in 3 to 5 minutes), the septal extract was administered intravenously. It promptly counteracted the symptoms in the monkeys causing them to immediately become responsive and alert.

We first administered the septal extract to patients in October, 1955. In all, it has been given to 38 patients. The extract always is given intramuscularly to humans. One patient has received it regularly for 18 months; another, for 8 months; others have been carried for shorter periods. Patients, after receiving the medication, have consistently shown an increase in levels of reduced glutathione much as Altschule reported(20) for his patients receiving pineal. The speed of adrenaline oxidation has slowed somewhat and the serum-copper levels have dropped. The patients showed a good response to hypodermic adrenaline although this test was not done on all subjects beforehand. Urine catecholamine determinations have been carried out on only the two patients who have received the medication longest. In both, the total excretion was as for the normal group although one showed much more marked output following the administration of adrenaline than did normals receiving the same amount of adrenaline. It thus seems that

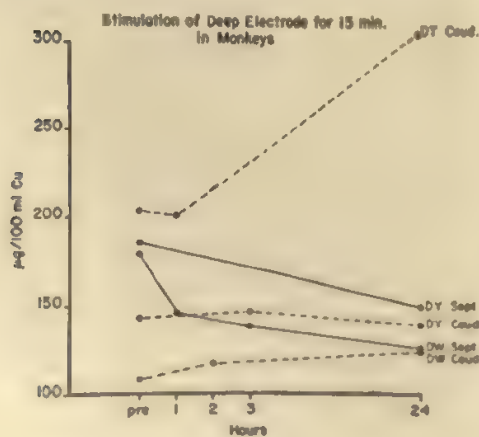


FIG. 4

administration of septal extract intramuscularly tends to alter the metabolism of catecholamines so that the response is closer to that of the nonpsychotic group. The number of studies in the patient group tested is, however, small and this, therefore, must be a preliminary assumption.

A group of 8 schizophrenic patients was treated with extracts similarly prepared from other regions of the cattle brain including caudate, hippocampus, cortex and brain stem. This small group did not respond with changes in the measurements used as did the group of patients receiving the septal extract.

Recently it was reported by Abramson *et al.* (21, 22) that extracts of cattle brain had reversed the LSD effects in Siamese fighting fish. They stated that clinical trials with schizophrenics were planned. We know of no reports of brain extracts, as distinct from pineal gland, being used with schizophrenic patients.

At present, because of many factors including inconsistencies in our preparations as well as the well known difficulty in evaluating any clinical therapy in schizophrenics, we do not feel that we have sufficient data to adequately evaluate the effectiveness of either of these preparations (*i.e.* ceruloplasmin and septal extract) in terms of clinical results. We therefore wish to limit our presentation of therapeutic agents in patient studies to a discussion of the changes in the biological measurements.

SUMMARY

Data we have collected suggesting that schizophrenia is a deficiency disorder in the area of amine metabolism are presented. Investigations are currently under way toward finding substances which might alleviate this deficiency.

BIBLIOGRAPHY

1. Rado, Sandor, Buchenholz, Bruce, Dunton, Harlow, Karlen, Saul H., and Senescu, Robert: Schizotypal Organization, Preliminary Report on a Clinical Study of Schizophrenia, in *Changing Concepts of Psychoanalytic Medicine*, edited by Sandor Rado and George E. Daniels, New York: Grune & Stratton, Inc., 1956.
2. Bleuler, Eugen: *Dementia Praecox or The Group of Schizophrenias*, New York: International Universities Press, 1950.
3. Hoch, Paul, and Polatin, Phillip: *Psychiat. Quart.*, **23**: 248, 1949.
4. Heath, R. G.: *The Theoretical Framework for a Multi-disciplinary Approach to Human Behavior, in Studies in Schizophrenia*, Cambridge: Harvard University Press, 1954.
5. Heath, R. G.: *Studies in Schizophrenia*, Cambridge: Harvard University Press, 1954.
6. Leach, B. E., and Heath, R. G.: *A.M.A. Arch. Neurol. & Psychiat.*, **76**: 444, 1956.
7. Leach, B. E., Cohen, Matthew, Heath, Robert G., and Martens, Sten: *A.M.A. Arch. Neurol. & Psychiat.*, **76**: 635, 1956.
8. Martens, S., Leach, B. E., Heath, R. G., and Cohen, M.: *A.M.A. Arch. Neurol. & Psychiat.*, **76**: 630, 1956.
9. Heath, R. G., Leach, B. E., Martens, S., and Cohen, M.: *Studies in Mind-Brain Relationships, Behavioral Changes with Administration of Taraxein, a Substance Extracted from Schizophrenic Serum*, New York: Grune & Stratton, Inc., to be published.
10. Heath, R. G., Martens, S., Leach, Byron E., Cohen, Matthew, and Angel, Charles: *Am. J. Psychiat.*, **114**: 14, 1957.
11. Becker, H. C., Peacock, S. M., Jr., Heath, Robert G., and Mickle, W. A.: *Methods for Stimulation Control and Concurrent Electrographic Recording in Electrical Stimulation of the Brain (arising out of the Symposium of Brain Stimulation in Houston)*, in press.
12. Becker, H. C., Founds, W. L., Peacock, S. M., Jr., Heath, R. G., and Llewellyn, R. C.: *EEG and Cl. Neurophys.*, **9**: 533, 1957.
13. Leach, B. E., Heath, R. G., and Strohmeier, F.: *Fed. Proceed.*, **14**: 242, 1955.
14. Heath, Robert G., and Leach, B. E.: *Multi-disciplinary Research in Psychiatry*, in *Changing Concepts of Psychoanalytic Medicine*, ed. by Sandor Rado and George E. Daniels, New York: Grune & Stratton, Inc., 1956.
15. Heath, R. G., Martens, S., Leach, B. E., Cohen, M., and Feigley, C. A.: *Behavioral Changes in Nonpsychotic Volunteers Following the Administration of Taraxein*, *Am. J. Psychiat.*, to be published.
16. Sulkowitch, H.: *Endocrinology*, **59**: 260, 1956.
17. Sulkowitch, H., and Altschule, M. D.: *The Excretion of Urinary "Epinephrines" in Psychiatric Disorders*, to be published.
18. Holmberg, C. G., and Laurell, C. B.: *Acta. Chem. Scandinav.*, **2**: 550, 1948.
19. Kabat, E. A., Wolf, Abner, and Bezer, Ada E.: *J. Exper. Med.*, **88**: 417, 1948.
20. Altschule, Mark D., Siegel, E. P., Goncz, R. M., and Murnane, J. P.: *A.M.A. Arch. Neurol. & Psychiat.*, **72**: 1954.
21. Abramson, H. A., and Evans, L. T.: *Science*, **120**: 990, 1954.
22. Abramson, H. A., Sklarofsky, B., Baron, M. O., and Gettner, H. H.: *A.M.A. Arch. Neurol. & Psychiat.*, **77**: 439, 1957.

CERTAIN ASPECTS OF SEX PSYCHOPATH LAWS¹

KARL M. BOWMAN, M.D.² AND BERNICE ENGLE³

Introduction.—Three years ago we reported on the origins, development and status of the sex psychopath laws then existing in 23 states and the District of Columbia. We reviewed the numbers of persons handled under the laws, the methods of treatment and some opinions of authorities as to the results. We also appended synopses of the main provisions of these laws in the 24 jurisdictions (1, 2).

Brief History.—Sex psychopath laws arose 20 years ago. The commission of a few violent sex crimes, usually involving a child, and the seeming increase of such crimes aroused public opinion. Difficulties in bringing charges and obtaining convictions under statutory law added to public dissatisfaction. Also, the modern idea that sexual psychopathy is related to mental illness led to the demand for medical treatment to rehabilitate sex offenders, and even to prevent sex crimes by screening out potentially dangerous persons.

Michigan's special law, passed in 1937, was declared unconstitutional. The first to stand, the Illinois law of 1938, and Minnesota's 1939 law, validated by the United States Supreme Court in 1940, substituted civil for criminal proceedings at an early stage. The next 10 states followed closely this prototype. Many required no charge or crime, for citation to a hearing; definitions of sexual psychopathy were legal rather than medical; and civil liberty was invaded. Earlier one of us (KMB), with Rose, pointed out the medicolegal difficulties in defining the concept of sexual psychopathy (3).

With the enactment of New York's 1950 law, the special laws began to maintain more safeguards to personal liberty. Sexual psychopathy was not defined; criminal proceed-

ings were not interrupted; but complete medical and psychiatric examinations were interposed for all persons convicted of specified sex felonies or certain repetitive misdemeanors. Treatment under an indeterminate commitment as a rule protected the person from further proceedings on the original charge. One or two states legalized the setting up of research into the nature of criminal behavior and methods of therapy.

As we pointed out in the earlier study, much research into the factual foundations of criminal law is necessary before codes and laws can be successfully revised. The revisions must take into account all the pertinent Kinsey data that are gradually being assembled and also the results of such studies as the New York Report that was just issued.

Present Status—New Laws.—In the 4 years since we finished our earlier survey numerous changes have taken place. Three states, Florida, Iowa and West Virginia have passed new laws, making the present total 27 jurisdictions, or 55% of the 48 states and the District of Columbia. In this period, too, about a dozen states enacted changes that vary from making a sex psychopath's escape from a hospital a felony, to passing a whole new law, in Illinois.

Florida's new law, passed in 1955, follows the general mode. It provides a hearing for anyone charged with or convicted of a criminal offense and appearing to be a criminal sexual psychopathic person who is suffering from a mental disorder of at least 4 months' duration, coupled with criminal propensities to the commission of sex offenses.

The Iowa law, also passed in 1955, reverts to the earlier pattern of sex psychopath laws. All persons charged with a public offense who suffer from a mental disorder not a basis for commitment, have criminal propensities toward the commission of sex offenses and who may be considered dangerous to others, are classed as criminal sexual psychopaths. The action to establish criminal sexual psychopathy is tried as a special proceeding, with a jury trial optional. The court may exclude the public from such pro-

¹ Read at the 113th annual meeting of The American Psychiatric Association, Chicago, Ill., May 13-17, 1957.

² Professor of Psychiatry, Emeritus, University of California, School of Medicine, San Francisco, Calif.

³ Research Associate, University of California, School of Medicine, San Francisco, Calif.

ceedings. The committed person may be discharged at the end of a 3-year probation.

The newest law relating to sex offenders, passed 2 months ago by West Virginia, illustrates many current trends in such legislation. It follows the New Jersey law, but goes it one better with these main features:

1. Commitment required for persons convicted of "Incest and Crimes against Nature," and at court discretion for other convicted sex offenders, presentence medical and social examinations; with 2 purposes: a. protection of public; b. prevention of future offenses.

2. Specialized treatment in suitable cases, under the department of mental health board, with either inpatient or outpatient treatment.

3. Discharge or parole at board judgment as to "reasonable probability" of success, with consent of the committing court in all felony cases, and within the maximum legal term of the offense unless:

4. The board deems the person still dangerous to the public and, at least 90 days beforehand, orders his continued treatment and applies for a review, wherein the convict has a full hearing, except for jury trial.

5. The board's order, if confirmed, may continue thereafter indefinitely, except that a new order must be similarly confirmed every 5 years thereafter.

6. The law also provides for voluntary admission and either inpatient or outpatient treatment of anyone who thinks himself liable to commit a dangerous sexual action.

7. The law does not exclude or otherwise interfere with the convict's legal rights of habeas corpus, appeal to a superior court, or other civil rights. It does, however, in what are judged to be suitable cases, substitute treatment and rehabilitation for penal service.

8. No mention of the word sex psychopath, but only of a person's "mental or physical aberrations."

It does discriminate between sex crimes in that it requires presentence examinations in those convicted of incest and crimes against nature, but in other sex offenses leaves the decision to court opinion.

Important changes in the 10 or so states in the past 3 years centered on problems of redefinition, classification, and treatment. California's new maximum security 1,200-bed state hospital, opened late in 1954, receives all observation cases and committed sex offenders, who occupy about two-thirds of its beds. A 1955 amendment provides that a person found to be a sexual psychopath, but not amenable to state hospital treatment, may be recertified for a hearing and be committed to the Department of Mental Hygiene, insti-

tutional unit, at a state prison. This change was made to take care of persons convicted of a misdemeanor sex offense whose indeterminate commitment is necessary protection to society, or persons committed as sex psychopaths who are not treatable. Hospitals cannot be turned into maximum security prisons.

An Illinois commission studied special sex offense laws and recommended important changes to the 1953 legislature. Finally, 2 new laws passed in 1955 repealed or amended the old sections and added new ones. The new term defined a sexually dangerous person as one with a mental disorder of at least a year's duration, coupled with criminal propensities to the commission of sex offenses (including acts of sexual assault or of sexual molestation of children). Further amendments are being formulated to clarify the reclassification of persons formerly committed as criminal sexual psychopaths. The present laws are believed to distinguish, better than the old ones, between socially distasteful sexual conduct and socially dangerous sexual offenses.

Three other states also redefined the dangerous sex offender, in the effort to let the term conform with medical diagnosis. The Massachusetts and Nebraska revisions define the defendant's misconduct in sexual matters as showing "a general lack of power to control his sexual impulses," a risk of his injuring the objects of "his uncontrolled or uncontrollable desires," or a pattern of compulsive or violent behavior. The 1955 Wisconsin code provides for the offender whose crime, except for homicide or attempted homicide, "was probably directly motivated by a desire for sexual excitement" in its commission. The law requires a presentence social, physical, and mental examination of persons convicted of rape, related crimes and offenses against children. Psychiatric treatment is mandatory for convicted sex offenders judged able to benefit from it. In regard to these changes, an official comments, "We very much dislike any reference to the term 'sexual psychopath,' which appears nowhere in our statutes or our thinking."

New Hampshire revised a section on transfer of custody of sexual psychopaths. A New Jersey amendment in 1954 added to

subject to treatment. A 1954 amendment, passed over the governor's objections, directed that the state examine a balance between state and county.

Colorado has revised its entire state code, and now its laws provide for mental examinations of psychopaths of various ages, and for a very broad sentence, which is added to the public proper protection against future criminal conduct. The act is novel in that it does not exempt sex offenses from other criminal offenses. Oregon also has no sex psychopaths in the usual sense. Its law requires a psychiatric examination and report to the court of persons convicted of certain offenses against children under age 15, which in 1955 was raised to age 16. Rape, incest, sodomy, and inducement to these acts are typical offenses.

The states of Massachusetts, Ohio, Oregon, Wisconsin, and Wyoming deserve credit for the way in which they have extended the earlier laws regarding sex offenders to apply to other persons convicted of serious crimes. For example, Massachusetts law 2 years ago repealed its sex psychopath law and authorized treatment facilities for sex offenders in the department of mental health. This program has now been expanded to provide to courts with psychiatric clinics and to give psychiatric treatment to all types of offenders recommended by the courts or the department of corrections. Under the new version of Ch. 123 A, sex offenders are handled "in the general and greatly broadened psychiatric services now available to the Department of Corrections and the courts."

A few states, for example California, Maryland, and now West Virginia, provide for the voluntary commitment of persons afraid of getting into trouble as sex offenders. Unfortunately these provisions are little used.

Several states have concentrated on legislation against those who sexually molest chil-

dren. Wyoming added to its special law a Child Protection Act that contains a stiff provision relating to molestation of children. Mississippi considered a bill severely increasing the statutory penalty for molesting children. North Carolina in 1955 passed a law relating to the taking of immoral, improper or indecent liberties with children below age 16. An Oklahoma official deplored the fact that the state's present penalty, set under a 1945 statute, of a 1-to-5-year term is "not a particularly effective solution" to the problem of several serious sex crimes committed against children in the past few years.

Amendments are pending in 7 states. The Indiana bill concerns procedures; it requires the examinee, under penalty of contempt of court, to answer all questions asked by the psychiatrist, whose written report is open to the accused and his counsel, but is not competent evidence in any but the current inquiry into psychopathy. In Nebraska a bill provides that parents or guardians may not be excluded from the hearing into sexual psychopathy "except when necessary to maintain order in the courtroom."

Of 4 bills pending, a Michigan one would require all persons convicted of any one of 6 sex offenses "to register with the Commissioner of State Police," who is authorized to enforce the act. A Pennsylvania bill concerns mandatory reviews and discharges of committed persons. Minnesota has appointed a legislative interim committee to study proposed changes.

Decisions.—Numerous decisions have been rendered on appeals from the special laws. In general they uphold the legality of the present laws.

Two recent opinions in the District of Columbia held that the proceedings to determine sexual psychopathy are civil in nature; that they do not delay the defendant's trial since he is being confined because of sexual psychopathy; that his current status may be tested at any time by habeas corpus proceedings; and that because the intent of the act is remedial treatment, confinement must be in a place for the mentally ill who are not insane. New Jersey opinion, however, variously defines treatment. A person's transfer from mental institution to prison

not a sentence, "but merely changes the commitment and supervising agency in stages of treatment."

New Hampshire and New Jersey opinions also held that the proceedings, civil in nature, offend no provision of criminal due process. The commitment is an institutional confinement, not a sentence or penalty. A New Hampshire opinion held that information given medical examiners by the defendant "was not compulsory use of self-incriminating evidence contrary to the Constitution." Nor does the provision of no right to trial by jury render the act unconstitutional.

The rights of released persons may be sharply restricted; according to a New Jersey decision, the probation can be revoked and the person recommitted if he fails to comply with conditions such as the order to undergo psychiatric treatment. A Pennsylvania decision affirmed a court order whereby a defendant, sentenced first for indecent assault to 23 months in jail, was later found to be a sexual psychopath, and committed for an indeterminate period of one day to life. A Michigan opinion held that the petition must clearly set forth the facts tending to show sexual psychopathy. And a Minnesota decision allowed the time served at a state hospital to be "deducted in computing the length" of the prisoner's subsequent term.

Treatment Facilities and Results of Therapy.—The 1200-bed Atascadero State Hospital, opened in 1954, handles all California observation and commitment cases of sex psychopaths, who occupy about two-thirds of the beds. All patients are men. Prior to the opening of this new maximum security hospital, sex offenders were divided geographically between 2 state hospitals, Metropolitan and Mendocino.

Drs. Lieberman and Siegel(6) at last year's meeting reported on treatment in Mendocino State Hospital during the final 2 years before Atascadero was opened.

Dr. Rood's report(8) of Atascadero shows some 700 sexual psychopaths in residence at any period; these are chosen as suitable for group and individual psychotherapy. Currently about a third of all persons under observation are found not to be sexual psychopaths. Drs. Rapaport and Lie-

berman also describe the new program(7).

A follow up study of releases from Atascadero for 13 months ending with December 1956 shows the following summaries: of 782 patients discharged, 681 were released to their homes, most of them on probation, and about 100 were returned to prison or jail; of 704 released persons, 52 (7.4%) are known recidivists and 46 (6.5%), recidivists in other than sexual offenses. The records of 415 discharges, followed for at least 6 months, showed gainful employment, and good to fair adjustment in more than 90% of cases. The most crucial period for the patient was the first 5 months, in which half the recidivists were rearrested. The results so far are felt to show the effectiveness of this medical-legal approach to men whose serious personality maladjustment resulted in socially unacceptable sexual behavior. The entire follow-up study is planned to cover a 5-year period.

Besides California, 2 other states have special treatment institutions. The District of Columbia has a ward in St. Elizabeths where complete inpatient treatment is given. No recent report of results of therapy has been made. The other state is Maryland, which in January 1955 opened the Patuxent Institution. This institution diagnoses and evaluates individuals for the courts, to assist the court disposition of offenders. Committed offenders are returned to the institution for a completely indeterminate sentence. The 89 persons so far committed receive milieu therapy—participating in occupational and educational therapy, counsel meetings, classical group therapy—and tranquilizing drugs. The institution cares for both sexual psychopaths and offenders with sociopathic personalities who are not psychotic.

New York has psychiatric service at all its correctional institutions, which at present are served by 24 psychiatrists, many part-time, and 16 clinical psychologists. State officials feel a special obligation toward the 160 sex offenders committed on a day-to-life term, most of whom are confined in 2 prisons, where 3 psychiatrists collaborate with the prison personnel to maintain diagnostic and treatment service. Treatment methods include individual and group psychotherapy, special drug therapy, convulsive

shock therapy and combinations of these. Although admitting the difficulties in effecting permanent character changes, officials report "success in many cases. Whether this is going to be of lasting benefit has not as yet been proved, but certainly the efforts have been extremely worthwhile."

"Final Report," issued early in 1957, covers New York's research study and treatment under direction of Dr. Bernard Glueck(5), of persons convicted of sex crimes for a 3-year period, 1952-55. It contains much valuable information on the methods of the study, problems of treatment and the nature of the findings.

In Massachusetts the sex psychopath law was repealed in 1955 and in its stead an act passed authorizing treatment facilities for sex offenders in the divisions of mental hospitals. In fact, sex offenders are now handled as only one part of the general and greatly broadened psychiatric services available to the department of correction and the courts. Separate statistics are not kept, so that, except individually, those now under treatment in the hospital because of sex offenses cannot be separated from those treated because of other crimes. Similarly, Ohio, Wisconsin, and Wyoming laws do not distinguish sexual from other serious crimes as causes for treatment. These states thus go farther than Maryland law in extending diagnostic studies and treatment to various classes of offenders.

Wisconsin has positions for 8 staff members, three of them psychiatrists, and also uses the state's outpatient psychiatric facilities. Of 115 persons discharged so far, 6 later committed sex offenses in the state. A 400-bed psychiatrically oriented institution will be included in the 1960-61 budget requests.

Some states describe their treatment program as somewhat spotty; e.g., Colorado has given no individual psychotherapy, but has continued at least one section of group psychotherapy. Some patients have participated actively in the hospital milieu therapies. One patient and his wife strongly demanded castration, which was done; more than a year later the patient had had no trouble.

In administering its new law, Illinois classifies sexually dangerous persons into 5 categories, 1 of which is the treatable group.

Treatment is carried on in the psychiatric division of the prisons and includes medical, surgical, counseling, educational, vocational and social therapies, and emphasizes corrective training and rehabilitation.

Minnesota's 1953 revised law is closely patterned after the Wisconsin law, except that it has no mandatory provisions. Of 50 persons examined under the law, none has been recommended for treatment or custody as a sexually deviated person. This may be explained by the fact that no funds were appropriated for additional clinical personnel, and that the present limited force of examiners do not believe that sex offenders can profit from psychiatric treatment.

Missouri since 1949 has committed to state hospitals 50 patients, of whom 15 were legally discharged, 2 escaped and 33 are still in residence. Treatment methods were not described.

New Jersey's diagnostic center sends its committed sex offenders to 4 state hospitals, where they are given mental hospital care; the basic treatment is group psychotherapy, with special treatment as available in the individual case. Some persons the center puts on probation, sometimes with outpatient psychiatric treatment.

New Hampshire and Vermont described no special methods of treatment.

Treatment results are on the whole reported as being fairly satisfactory. In California the average length of hospitalization for sex psychopaths is given as 18 to 20 months, if offenders with good prognosis can participate in an intensive treatment program for a year. Physicians on these services emphasize the value of recertification, whereby the offender unable to benefit from treatment can be returned to prison. Offenders are usually discharged on the basis of favorable response to treatment and as being no longer a menace to society.

On the other hand, some prisoners committed in 1950-51 in New York are still in confinement. So far we have not gathered statistics as to present maximum lengths of confinement for the various sex offenses.

Recidivism.—Our available figures show that about 7% of discharged sex offenders handled under the sex psychopath laws are returned after treatment to prison or hospi-

STATISTICAL TABLE
SEX PSYCHOPATH STATES

	Law Enforcement period	Total commitment	Total observation	Now in residence	Release discharges	Probation or parole	Readmission
Alabama	4	(1 a readmission) 2315	2861	558+ (98 obs)	?	—	1
California	17	(Incomplete) 38 86	—	—	16 56	3 AWOL	2
Colorado	3	—	—	—	—	—	5
D. C.	8	—	—	30 (2 AWOL)	—	—	—
Florida	1	—	—	203	43	—	—
Illinois	17 (CSP) 1 (SDP)	94 (79-1956) 169	?	—	—	—	—
Indiana	7	—	—	—	—	—	—
Iowa	1	—	—	—	—	—	—
Kansas	3	—	—	—	—	—	—
Massachusetts	4	89	—	—	?	—	—
Michigan	2	—	—	—	—	—	—
Minnesota	19	706	—	329 (8 AWOL)	130	204 (35 died)	—
Missouri	14	—	50	—	—	—	—
Nebraska	3	50	(5 in 1956)	33 (2 AWOL)	15	—	—
New Hampshire	7	—	—	—	—	—	—
New Jersey	7	—	—	—	—	—	—
New York	7	500	2400	190	234	240 OPD	20
Ohio	7	196	—	160	36	—	—
Oregon	2	—	112	—	—	—	—
Pennsylvania	2	5 (Committed as psych. 55)	—	—	—	—	—
Pennsylvania	5	69	139 (3f) (9 incorr. 23 in Bur. Corr. Corr referred 13 in Men. Hosp.)	—	—	7	—
Vermont	13	—	—	6	—	—	—
Virginia	0	43 in 56, only 11 diagn. as personal disord. c. sex deviat.	—	5	—	—	—
Washington	9	46	151	50 commtd. 22 observ.	—	—	—
Wisconsin	fig. for last 3 years	310	818	—	115	62 OPD req. 33 par. ext.	6
Wyoming	6 years since 1951 repeal	0	?	—	—	—	—
W. Virginia	—	—	—	—	—	—	—
Total	—	4431	—	—	—	—	—

tal. This is regarded as an excellent record.

Comparisons, however, are hard to make. It is known both from the Kinsey studies and from other reports that the prevalence of sex crimes cannot be accurately estimated. As noted previously, perhaps not more than 20% of such offenses as rape and child molestation are reported to police. The differing legal definitions of sex offenses, the various degrees of severity and the procedures of indictment and trial further lessen the accuracy of national statistics on sex crimes.

Available statistics indicate a low rate of recidivism in sex offenders, as compared with other types of offenders. The New York research project, however, showed a prior high rate of recidivism in the sex offenders included in its survey. The 7% of offenders who repeat sex offenses may therefore be a good record. The fact that some 30% of discharged mental patients are rehospitalized, compared to only 7% of sex offenders treated under the special laws, points to some success in therapy.

Criticisms by state officials.—So far, our material shows few adverse criticisms. A psychiatrist in the treatment ward at St. Elizabeths considers the main weakness in the District of Columbia sex psychopath law its lack of provision for the disposition of nontreatable patients. In Pennsylvania staff members in both the mental health and corrections departments feel that the old Greenstein act contains all the essential features of the Sex Offenders Act except for directions as to consistent follow up of paroles. They would therefore repeal the Sex Offenders Act. They also readily admit the state's lack of personnel for an adequate job of treatment of these offenders.

Trends.—Our survey of the sex psychopath laws and their administration in the 27 jurisdictions shows several current trends. In general, the states with these laws are accepting more responsibility for treatment of offenders committed on indeterminate sentence. Authorities have also accepted the fact that although treatment units may function under certain circumstances in prisons fairly well, hospitals cannot be turned into maximum security prisons. Some compromise must be made.

Administrators of correctional and treat-

ment centers have also made more effort to select nonpsychotic offenders judged to have a good prognosis and to give them fairly regular, comprehensive treatment.

With the rise of more and better treatment facilities has gone the trend against singling out the sexual psychopath, and some states decry any use of the term. Sex offenders are seen as one group of criminals, all of whom need the best available methods of treatment, correction and rehabilitation. In fact, about a half dozen states no longer distinguish sex offenders as a group from other groups of criminals. This is a psychiatric advance, when not just sex offenders, but all important criminals are given at least a psychiatric examination.

There is also the trend to differentiate minor and nuisance offenses from major sex crimes. Many laws separate crimes of violence and serious personal damage, whether physical or psychologic, from offenses that are distasteful to the public mores. They still retain the right of treatment for certain offenders who violate the law.

The psychiatric evaluation of sex offenders and psychiatric therapy are steps in one direction. The older concept of penology emphasized due process of law and protection of the defendant's civil rights before conviction and a sentence related to the seriousness of the crime committed. The newer concept deals with the criminal's personality rather than with the actual crime committed. On the basis of medical, psychiatric and psychologic evaluations it may be decided whether, for a relatively minor crime, a person is put on probation or segregated, perhaps for the rest of his life, since under most laws he must remain until psychiatric and other studies indicate that he is safe to return to the community. The attempt to stipulate complete recovery or cure has caused considerable trouble. The best laws allow the judgment to be about like that of a good parole board, namely that the patient is now a good risk.

Brancale and Bixby's recent article(4) describes the handling of sex criminals under the New Jersey law as "an awkward but practical combination of legal rights and clinical evaluation and treatment." These provisions do not interfere with the due proc-

ess of law during the trial nor with the maximum term beyond which the offender may not be deprived of his liberty; nor do they require more clinical science than is now available. They do require an extensive psychiatric and other detailed study of convicted sex offenders at the New Jersey Diagnostic Center, which for due evidence of mental, emotional or physical aberration recommends to the court either probation under outpatient psychiatric treatment or commitment to a state hospital for treatment not to exceed the maximum penal term for the particular crime. The New Jersey law avoids use of the word 'cure' and leaves to special professional boards the matter of the patient's readiness to return to the community.

CONCLUSIONS

From this brief review of the sex psychopath laws as they operate in more than half of the 49 United States jurisdictions, we suggest the following recommendations.

The procedure as now carried out in some states corresponds to the ordinary commitment of a patient, under noncriminal codes, to a mental hospital, where diagnostic studies and treatment are carried out. After periodic treatment reviews, the patient is judged to be a good enough risk to try living outside, and he is put on parole. There will be some failures, but these are to be expected with any type of handling and treatment.

What is wrong is a prevalent idea, found in many early special laws, that magic tests and formulas enable the making of 100% accurate predictions. No professional staff or board can state positively that an individual will never repeat an antisocial act.

In many states the sexually deviated person is taken out of the criminal group and dealt with under civil law. This is the concept of mental illness and treatment as against that of crime and punishment.

SUMMARY

Our review of the status of sex psychopath laws, brought up to date, shows the addition of special laws in 3 states, Florida, Iowa and West Virginia, bringing the total number to 27 jurisdictions. The laws in a dozen or so states have been changed or revised, varying from a whole new law in Illinois to minor changes in New Hampshire and other states. Several states reported bills for revision pending. Appellate court decisions, in general, support the constitutionality of these laws and the trial procedures. Trends in the laws and their administration point to more satisfactory treatment results than reported earlier; a low rate of recidivism; more use of probation, at times with outpatient psychiatric treatment and supervision; release of patients on parole as good risks; and the extension in a few states of diagnostic studies and treatment to persons convicted of serious crimes other than sex crimes.

We acknowledge gratefully the help and cooperation of many state agencies in supplying us with current information on sex offense legislation.

BIBLIOGRAPHY

1. Bowman, Karl M. Review of sex legislation and control of sex offenders in the United States of America. California Sexual Deviation Research, Final Report, March 1954. Also in International Review Criminal Policy, July 1953.
2. Bowman, Karl M., and Engle, Bernice. Synopses of special sex psychopath laws—United States. *Ibid.*
3. Bowman, Karl M., and Rose, Milton. *Am. J. Psychiat.*, 109: 177, Sept. 1952.
4. Brancade, Ralph, and Bixby, F. Lovell. *Nation*, 184: 293, Apr. 6, 1957.
5. Glueck, Bernard C. Final Report. Research project for the study and treatment of persons convicted of crimes involving sexual aberrations. New York, 1957.
6. Lieberman, Daniel, and Siegel, Benjamin, A. *Am. J. Psychiat.*, 113: 801, Mar. 1957.
7. Rappaport, Walter, and Lieberman, Daniel. *California Med.*, 85: 232, Oct. 1956.
8. Rood, R. S. *J. Soc. Therapy*, 4: 1956.

P.M.-G.M. SUCCINYLBCHOLINE-MODIFIED ELECTRO-SHOCKTHERAPY WITHOUT BARBITURATES¹

DAVID J. IMPASTATO, M.D.² AND ANTHONY R. GABRIEL, M.D.

INTRODUCTION

Electroshocktherapy (EST) is now universally established as an important therapeutic arm in psychiatry. This recognition was established only after it was repeatedly demonstrated upon thousands and thousands of patients that "EST effectually eliminates suicidal risk within a few days; makes tube feeding unnecessary; and in the vast majority of patients terminates depressive episodes within 3 or 4 weeks"(1). EST is effective in any psychosis of acute onset. It has been used as a life-saving procedure in acute manias with extreme hyperactivity, dehydration and fever. It has also been used in the management of physically ill poor-risk patients to render them less hostile and more cooperative so that proper medical treatment can be given(2). The medical visiting staff of mental hospitals are well aware of this use of EST and will often insist that a patient be given EST though the psychiatrist is hesitant in so doing. They have often witnessed the miracle of the dying man coming back to life after a few treatments. EST is such a reliable therapeutic tool that psychiatry could not function properly without it. Any psychiatrist not availing himself of EST can be justly accused of doing an injustice to at least some of his patients.

From the very beginning in 1938(3) electroshocktherapy has been frequently modified to reduce or eliminate undesirable aspects or complications. Succinylcholine (SCC), first used in 1952(4) is a more recent modifier of EST, which when properly used eliminates fractures in almost 100% of all patients.

As first used, SCC was given in doses of 20 mg. or larger. This caused complete paralysis and apnea, requiring oxygen. In the process, from 5 to 10 seconds after the in-

jection, the patient first felt the painful sensations of muscular twitchings caused by initial depolarization of the motor end-plates and a few seconds later, a feeling of suffocation, from respiratory paralysis; which he endured for 30 seconds or longer, till the GM was given. On recovering from the convulsion, the patient remembered the feeling of suffocation, and in more instances than not, refused to continue with the treatment. To avoid these undesirable side actions, anesthesia with ultrashort acting barbiturates was proposed(5). The barbiturates are given in 2.5 to 5% solution by the syringe method, or in lesser concentration by intravenous drip. With the latter, the patient is placed in a deep level of anesthesia with relatively high doses of barbiturates. With the syringe method, smaller doses of the anesthetic are used and the depth of anesthesia is relatively more superficial. With either method, especially the drip, the apnea was prolonged.

The drip method of anesthesia was brought directly to the EST unit by the hospital anesthetist, who, used to the management of prolonged apnea in the operating room, saw no unnecessary danger, or immediate necessity, to modify his technic so as to avoid apnea. The cooperating psychiatrist extremely alarmed and anxious at the sight of his patient lying motionless and breathless, was very thankful that the trained anesthetist was standing by to manage the dreadful complication.

For most patients, the anesthesiologist uses relatively large doses of SCC—40 mg. or more. His apparent intent is to so completely paralyze the patient that not a single muscle twitches. Why complete paralysis is necessary to prevent fractures is a profound mystery to most psychiatrists as they have proved time and time again that partial paralysis is sufficient to prevent fractures in nearly 100% of all EST patients.

Barbiturates are strong central respiratory depressants and capable, in certain patients, of producing death even in small doses.

¹ Read before The Society of Biological Psychiatry, Annual Meeting, June 15, 1957 at Atlantic City, New Jersey.

² Address: 40 Fifth Ave., New York 11, N. Y.

Muscle relaxants, through their central actions, may also depress the respiratory center and also produce death. In fact, death from muscle relaxants, at least in the past, has not been uncommon. One of us collected from the literature, 6 instances wherein patients, in the process of being premedicated for EST, died after the muscle relaxant was given but before the EST. In fact no EST was given; with the possible exception of one patient who was probably dead when the EST was given. None of these patients received SCC. In a group of 254 EST fatalities which one of us recently reported (6) at the First Annual Meeting of the Eastern Psychiatric Research Association in October, 1956, 39 of these patients had received muscle relaxants. This represents an unduly high percentage as most of these fatalities occurred before the advent of SCC, during which time relatively few patients were receiving muscle relaxants.

To summarize, we have seen that barbiturates are dangerous, and muscle relaxants are dangerous; and when the two are given together the danger is compounded. These drugs regularly cause apnea which has made a good number of psychiatrists abstain from using them. Other psychiatrists will use them only if an anesthetist gives them and manages the resulting apnea. The various methods of giving these drugs and of the subsequent management of the patient are cumbersome and time consuming, costly, and do not lend themselves to treating many patients within a short period of time.

Murray (7) has for some time advocated the use of SCC alone, without barbiturates in EST. He calls attention to the disadvantages of barbiturates in combination with SCC. Using small doses of SCC (10-15 mg.) and giving the convulsion 10 seconds after the onset of fibrillations, he has obtained excellent results in over 2000 patients. Murray has had no difficulty with his treatments; yet, others who have tried to give them have been unable to frustrate the feeling of suffocation and fear which most of the patients developed. Murray's method is largely applied to us. We thought that it would be an ideal treatment in the feeling of suffocation could be prevented. It occurred to one of us that, if perhaps, soon

after the SCC injection, the patient was rendered unconscious with a petit mal stimulation, he would not recall the feeling of suffocation. This idea proved to be correct on the very first trial (8), and gave rise to the PM-GM technic.

PM-GM MODIFICATION

The PM-GM technic is as follows: The patient is selected and prepared for EST in the usual manner. One-half hour prior to the treatment he is given 1.2 mg. (1/50 grain) of atropine either intramuscularly or sublingually. When this is not feasible the atropine may be given intravenously, from a separate syringe just before the SCC injection. If the Molac AC machine (9) is being used it is set at the Medium position. Ten mg. of SCC is now quickly given intravenously using preferably a tuberculin syringe and a 26-gauge hypodermic needle. When fibrillations are noted about the patient's mouth, or when he shows signs of impaired breathing (within 5 to 10 seconds after the injection) the petit mal stimulation is given. The patient may react to the petit mal by raising his hands toward the electrodes or muttering a word or two. This he does not recall after the grand mal treatment. He now remains motionless and without breathing, as in a state of suspended animation. Ten to 15 seconds after the petit mal, the grand mal stimulation is given in the usual manner. Adequate relaxation occurs in practically all patients. In the few patients in whom more relaxation is needed a few more milligrams of SCC may be given on the next treatment. The convulsion proceeds in the usual manner of SCC-modified convulsions except that invariably the patient is either breathing by the end of the convulsion or begins to breathe a few seconds later. At no time does he suffer from cyanosis. Since he breathes spontaneously he does not need oxygen nor the help of an anesthetist. The breathing here actually returns sooner than with unmodified EST. The psychiatrist not confronted with a motionless, breathless, cyanotic patient, is no longer alarmed at the idea of administering SCC by himself. Following the convulsion the patient recovers quickly since he has not received barbiturates. He is usually confused

and denies having had a treatment; later, when clearer he may remember it, but the only thing he clearly recalls is the injection. We have used the Molac II AC machine^{*} in our treatments but the PM-GM may be given with any shock machine available. With the ordinary Cerletti-Bini AC apparatus a setting of 110 volts for 1/10 of a second will produce an adequate petit mal in most patients. Occasionally in a few patients with extremely low convulsive thresholds, the petit mal will precipitate a convulsion. When this occurs, the convulsion is usually mild and carries little risk of causing a fracture. It is very important that the petit mal be severe enough to obliterate consciousness, for if it does not, the events from the time of the injection to the time of the GM stimulation may be recalled disagreeably.

In the PM-GM method we are confronted with a choice of giving a petit mal of sufficient strength to obliterate memory, but which in a few patients may cause a convulsion; or giving a weaker petit mal, which will not produce a convulsion but which may not cause complete unconsciousness. In the latter instance, the patient may recall the unpleasant sensations of both the SCC and the petit mal and develop fear of the treatment. Of the two alternatives the better one to follow is to make sure that the petit mal is strong enough to produce complete unconsciousness. When the PM causes a convulsion, the electric dosage can be lowered at the next treatment to avoid the convulsion.

TECHNIC WITH UNIDIRECTIONAL CURRENT MACHINES

With unidirectional current machines, two technics may be used: for the petit mal the machine is preset at the full range, that is 20 ma., 10 mg. of the succinylcholine is given and 5 to 10 seconds later the treatment switch is quickly turned on and off. Ten to 15 seconds later, the GM is given beginning at 15 ma. and raising it to 20 ma. within a few seconds, and proceeding in the usual manner. In the second technic, the machine is set at 15 ma.; the succinylcholine injection is given; 5 to 10 seconds later, the current

turned on. The milliamperage is kept steady at 15 ma. for 5 or more seconds, then gradually raised within another 5 seconds to 20 ma. and held there till the patient enters the tonic phase of the convulsion. Here apparently no petit mal is actually given. In effect, however, the prolonged induction time, from the time the current is turned on till the patient enters the tonic phase, 10 or more seconds, can be considered a fractionated long-lasting petit mal. We have found both of these technics effective, but prefer the latter method.

RESULTS

We have successfully given the PM-GM treatment to 150 patients in private practice and to 65 patients at Bellevue Hospital without encountering any post-convulsive apnea lasting more than 10-15 seconds; without once having had to use oxygen; without having any complaints of back pain which might be indicative of a fracture, and without producing a single fracture. (Only the Bellevue Hospital patients had X-rays pre- and post-treatment.)

COMPLICATIONS

The results with the PM-GM technic compared favorably with 145 patients treated at Bellevue Hospital with the Molac II and premedicated with a mixture of atropine sulfate 0.8 mg., (1/75 gr.), thiopental (Pentothal) or thiamylal (Surital) 100 mg. and succinylcholine (Anectine) 20 mg. (all given in the same syringe) in which not a single patient complained of pain or sustained a fracture. All of these patients however had post-convulsive apnea of varying duration, lasting up to 10 minutes, for which oxygen was necessary.

Few patients developed fear of the treatment. Relatively more of those treated at Bellevue Hospital developed fear, than of those treated in private practice. This discrepancy is due to the fact that at Bellevue the treatments were given by various residents who were not expert in the technic; while one of us treated all the private patients.

Study of the patients showing fear indicates that fear is not due to the method of

^{*} Manufactured by Reuben Reiter, D.Sc., 64 West 48th Street, N. Y. C.

treatment, but to a predisposition of the patient, and to imperfect technic. It may be avoided by adequate management; by assuring that the petit mal is strong enough to cause loss of consciousness; and by pre-oxygenation (5 to 8 deep breaths of pure oxygen before the succinylcholine is injected (10)).

SUMMARY AND CONCLUSIONS

PM-GM Succinylcholine-modified electroshocktherapy without barbiturates has the following advantages:

1. Only 10 mg. of succinylcholine are needed to produce sufficient relaxation to prevent fractures in practically 100% of all patients.
2. It dispenses entirely with the need of barbiturates.
3. It does not produce any more apnea than is produced following an unmodified alternating current treatment. In fact, due to the laryngeal relaxation produced by the SCC, patients breathe sooner and better with the PM-GM method than after unmodified alternating current treatment.
4. There is no need of oxygen following the convulsion.
5. The technic is very simple, and requires the least personnel for its administration. The psychiatrist can effectively give the treatment himself assisted only by one nurse. It can be given to a large number of patients within a short time.
6. Following the convulsion the patients are awake and clear within a relatively short time. This is advantageous in ambulatory patients.
7. Study of the problem of fear which occurs in a small number of patients with this method shows that the fear produced is not due to the method itself, but is inherent in the patient and sometimes is caused by imperfect treatment technic. Suggestions as to how to avoid fear are made.
8. We believe that the PM-GM technic is the safest electroshocktherapy technic so far developed and recommend its use.

BIBLIOGRAPHY

1. Gallinek, A. L. *Am. J. Psychiat.*, 113: 429, 1956.

2. Abrams, L. A., and Impastato, D. J. *Am. J. Psychiat.*, 113: 6, 1956.

3. Cerletti, U., and Bini, L. *Arch. Gen. di Neurol. Psichiat., e Psicoanal.*, 19: 266, 1938.

4. vonDardel, O., and Thesleff, S. *Anesth. and Analg.*, 31: 250, 1952.

5. Impastato, D. J., and Berg, S. *Am. J. Psychiat.*, 112: 2, 1956.

6. Impastato, D. J. *Dis. Nerv. Syst.*, 18: Sect. 2, 34, 1957.

7. Murray, N. *Texas Reports Biol. and Med.*, 11: 593, 1953.

8. Impastato, D. J. *Am. J. Psychiat.*, 113: 5, 1956.

9. Impastato, D. J., Berg, S., and Gabriel, A. *J. Nerv. Ment. Dis.* (in press).

10. Edwards, A. T., and Listwan, I. A. *Am. J. Psychiat.*, 114: 1, 1957.

DISCUSSION

WILLIAM KARLINER, M. D. (Scarsdale, N. Y.).—The PM-GM method described by Impastato stimulated my own work and enabled me to gather valuable experience in approximately 3,000 treatments I have given with some modification of this method.

I would like to stress a thought expressed by Impastato, that electroshocktherapy is an "effective tool and that psychiatry could not function properly without it." With all the experience gained from, and the progress made by, all forms of psychotherapies and various drugs including the tranquilizers, there is still no medication or other form of treatment that can terminate an acute affective episode as rapidly and thoroughly as electroshocktherapy. Impastato therefore is to be congratulated for having introduced a modification of EST which practically eliminates all complications, eliminates almost all physical contraindications, and is void of undesirable side actions.

In a paper by Emma and myself published in the *Journal of Nervous and Mental Disease*, endotracheal intubation was necessary 5 times in a 51-year-old man who received 23 electroshock treatments modified by Pentothal anesthesia and succinylcholine. When Pentothal was omitted and the dose of succinylcholine was reduced, this same patient had better muscular relaxation and started breathing spontaneously after the end of the convulsion.

One patient who received 150 mg. Pentothal and 10 mg. succinylcholine developed a severe rash and angioneurotic edema during one EST. When Pentothal was omitted during the next few treatments, there was no recurrence of the above symptoms.

Impastato mentioned that the PM-GM may be given with any electroshock machine available. I have found that a machine (AC current) with built-in adjustable voltage and automatic timing is superior to one where the petit mal stimulation is given by pressing down on the treatment button and then quickly releasing it. The ideal setting for PM stimulation in an ordinary AC apparatus is 100 volts and 1/10 of a second. This setting will not

precipitate a convulsion and increase the possibility of a fracture at a time before succinylcholine has reached its maximum effect of muscular relaxation. This setting on the other hand, is strong enough to render the patient stunned or unconscious and therefore unable to perceive the unpleasant side-effects of succinylcholine. On some occasions, I found it necessary to give 2 PM stimulations in close succession, that is, if the patient is too restless and too hard to hold down during the 20 to 30 seconds one has to wait for the GM stimulation which follows.

PM-GM succinylcholine-modified electroshock therapy without barbiturates eliminates or greatly reduces the post-convulsive apnea. Succinylcholine

does not alter the beneficial effect of electroshock. The dose of succinylcholine can be decreased considerably because when used alone without a barbiturate, equal or better relaxation is obtained.

I encountered no complications and no fatalities in all the treatments I gave with this method. I was able to treat patients with severe skeletal and cardiovascular pathology, whose physical condition previously would have contraindicated the use of electroshock.

This method enables us to treat a larger number of patients, since much less time is needed to carry out the procedure. Finally, it is important to note that this modification reduces or eliminates the threat of malpractice suits.

OF SCHIZOPHRENIA AND THE SCHIZOPHRENIC¹

VERNON KINROSS-WRIGHT, M.D., AND EUGEN KAHN, M.D.²

The theme of this Congress demonstrates clearly the persistent vitality of dementia praecox, since 1911 better known as the group of schizophrenias. The several clinical pictures classically described by Kraepelin and Bleuler have not changed. However, interest in schizophrenia simplex has waned despite the challenging paper of Diem and the pertinent efforts of Wyrsch. The statements of Manfred Bleuler in the 9th edition of Eugen Bleuler's textbook are almost identical with the description of schizophrenia simplex in the latter's monograph.

E. Bleuler's *Grundsymptome* (basic symptoms) common to all forms of schizophrenia of course hold true for the simple type, particularly the disturbance of thinking and the affective deterioration, and also the ambivalence.

There are a number of reasons for the neglect accorded to schizophrenia simplex in the clinic and in the literature. The disease is symptomatically colorless though occasionally enlivened by neurotic and psychopathic features. The diagnosis is frequently missed because of clinical inexperience, therapeutic over-optimism or uncritical psychoanalytic attitudes. Schizophrenia simplex lacks the fascination to the average clinician of, say, the paranoid variety.³

The formulations of Kraepelin and E. Bleuler still fill a deep clinical need. Were nosological considerations to be thrown overboard, the quest for etiology would be seriously imperilled. In so doing, psychiatry would relinquish its claim to being a science and reduce its expectation of discovering means of cure and prevention. While we realize the importance of factors which are

not so far accessible to the application of the cause and effect method, we believe that overemphasis or even exclusive preoccupation with these makes a mockery of sound clinical psychiatry. Indeed by some, the application of scientific principle to psychiatry is held to be obsolete. These psychiatrists claim to uncover facts by using a variety of phenomenological methods, overlooking the axiom that facts cannot but be the effects of preceding facts—which we call causes.

Schizophrenia is diagnosed on the basis of clinical findings which include response to treatment. There is considerable, though not universal, agreement concerning the symptoms which justify the diagnosis. There are personal differences in the attitude of the physicians. Some do not believe in schizophrenia; others assume that with this diagnosis all therapeutic, especially psychotherapeutic efforts are handicapped or even made illusory; there are, no doubt, a number of doctors who are simply afraid of making the diagnosis.

It is not generally known, or rather, not admitted that schizophrenia may spontaneously heal as well as arrest itself at any stage. Reports of recoveries and complete cures are still controversial. While there are authors who believe in complete cures, the majority know only social remissions. Kraepelin held that quite a few schizophrenics recovered fully. E. Bleuler was reluctant to admit of complete recovery. M. Bleuler assumes that one quarter of the schizophrenias make a social recovery, while one half heal with some defect, and the remainder deteriorate into the classical state of affective dementia. The late Frieda Fromm-Reichmann, after many years of intensive experience in analytical psychotherapy, apparently considered social recovery in one fifth of her chronic schizophrenias and improvement in about one half of them a fair result.

One should not disregard E. Bleuler's notion that the clinical picture, e.g., a paranoid one, may persist after the active disease process—whatever that may be—seems to

¹Read at the International Congress of Psychiatry, Zurich, 1927.

²Respectively Assoc. Prof. of Psychiatry and Prof. of Psychiatry, Baylor Univ. College of Medicine, Houston, Tex.

³It is impossible to estimate how many cases of schizophrenia simplex are missed under the heading of psychoneurosis. Many additional cases in this era pass under the name of involutional schizophrenia.

have been arrested. Wyrsh does "not believe that there is in the terminal stages still any organic process active." On the other hand, the disease process may continue under the surface after the disappearance of a characteristic clinical picture. One of us (K-W) has repeatedly observed the complete disappearance of paranoid syndromes under treatment with tranquillizing drugs. There was no cogent reason for assuming that the schizophrenia itself was cured—the less so as the former clinical picture promptly returned following withdrawal of the drug. We realize that this is not an unique observation.⁴

We are of the opinion that from an etiological clinical viewpoint schizophrenia simplex⁵ forms the matrix, the heart, of all the multifarious disease pictures included under the name schizophrenia. In this simple type only, the basic symptoms are observable, free from obscuring accessory symptoms. In other varieties of schizophrenia the change in affect, even when gross, and the thinking disturbance are frequently camouflaged. When time or treatment removes the cloak of accessory symptoms, the icing on the cake, so to speak, schizophrenia simplex is readily apparent. It scarcely needs to be said that the condition is then usually referred to as partial remission, ambulatory schizophrenia or chronic schizophrenic deterioration depending on degree of severity.

It has often been observed that simple schizophrenia is more common in men than in women. We consider that this sex difference is a spurious one. Society demands productivity and self-sufficiency in the male and their absence, by virtue of simple schizophrenia, causes early concern. In women, on the other hand, passivity and lack of drive are socially less crippling, indeed are expected to a certain extent, in

western cultures.⁶ For this reason the existence of simple schizophrenia may easily pass unnoticed.

The essence of schizophrenia, clinically speaking, is to be sought in schizophrenia simplex.⁷ It is manifested primarily in the affective change and disturbance of thinking, due presumably to biological alterations of which we are ignorant at the present time.

It is of profound importance that the distinction be clearly drawn between *schizophrenia the disease*, and the *schizophrenic person*. It is a platitude to say that those ailing of schizophrenia are schizophrenics. However, we must separate the two in our thinking to reach tenable conclusions about them. Many of the unprofitable attitudes held toward schizophrenia stem from our failure to do so. We may highlight the distinction by emphasizing that the schizophrenic has attitudes, while schizophrenia is built up of symptoms. This is a special case of patient versus disease. The one is a person, the other an abstraction.

The grand master of clinical psychiatry, Kraepelin, never denied that the clinician was always confronted with the problem of a sick person, despite his great emphasis on constructing a systematic nosology of well-delineated disease patterns. Eugen Bleuler took considerable pains to come to some understanding of his patients' symptoms. More recently, phenomenological, psycho-analytical and biological investigations have been increasingly focussed upon the patient as a person. Wyrsh's book *The Person of the Schizophrenic* (1949) is worthy of note. He used methods of clinic, phenomenology and existential analysis in order to come to a balanced attitude towards the schizophrenic person and towards the change he,

⁴ In this context, it is worth recalling that schizophrenia simplex is refractory to any kind of treatment.

⁵ Kraepelin's definition: "gradually increasing impoverishment and depletion (Veroedung) of all psychic life." E. Bleuler's definition: "dementia in the sense of schizophrenia quite gradually increasing over decades." M. Bleuler (1955): "Where there are only the basic symptoms to be seen we talk of schizophrenia simplex."

⁶ Benedetti, *et al.*, emphasize "that basic symptoms and courses of schizophrenia are very similar even under very different social conditions." They assume that the basic symptoms and courses have been shown independent of "culture" (authors' quotation marks).

⁷ E. Bleuler discusses a "latent schizophrenia" which mostly, but not exclusively seems to belong to the simple form. He even believes "that it is the most frequent form although it rarely comes to treatment as schizophrenia," but as "neurotics of various kinds, as degenerates etc." We may add that many so-called schizoids are probably suffering from latent or simple schizophrenia.

his world and his way of experiencing are undergoing. Wyrsh's warning: "Schizophrenia is a disease of the person; the person cannot be dissolved in psychological parts" was and still is timely.

Wyrsh was cautious in applying existential analytic notions. This cannot be said of all psychiatrists who committed themselves to the increasing interest in the schizophrenic person. They, with Ludwig Binswanger in the lead, leaned heavily on the individualistic philosophical trend started by Kierkegaard and continued in our own time by Heidegger. Psychoanalysts and existential analysts have gorged themselves, their students and readers with interpretations, often preposterous, of the schizophrenic's self and of his perception of the world. All experiences of the schizophrenic had to be explained at any cost in logic or adherence to the facts. Any interpretation which even presumed to explain the "reasons" why the patient became sick, was welcomed. Concepts of motivation were adjusted to preconceived interpretations in a procrustean fashion. These interpretations in their turn were often confused with facts and acquired a false etiological status. The law of cause and effect was frequently distorted or disregarded. The concept of schizophrenia, the disease, was all but destroyed in the process of interpreting the schizophrenic's experiencing.

Who then is the schizophrenic person? He cannot be measured directly by clinical investigations or laboratory techniques. The schizophrenic cannot be diagnosed as the disease schizophrenia is. *The schizophrenic person is recognized.* He is readily recognized by those with psychiatric experience, especially in the diagnosing of schizophrenia. He is not perceived as schizophrenic because he has schizophrenia, but because of his unusual, bizarre, twisted manner of behaving, his oral expressions and sundry peculiarities of communication, together with his obviously different experiencing of the world.

The schizophrenic person is not necessarily characterized by strange ideas or alien aspirations. Often his aspirations are vague or low. However, he tends to appear peculiar to others since they are unable to enter

his world via the pathway of normal human relationships. The peculiarity of the schizophrenic's own world easily passes unnoticed for the very reason that the "outsider" cannot enter. When accessory symptoms color his behavior the strangeness of his world becomes obvious. Occasionally striking traits and high aspirations are seen instead of the more common flatness and unproductivity. Eugen Bleuler said significantly, "There are many simple schizophrenics among the eccentrics of all kinds—world improvers, philosophers, writers and artists and degenerates." Such occurrences must be properly viewed. They are not symptoms of schizophrenia but individual adjustments to the change of the self and of the world in schizophrenic persons gifted in various ways.

An increasing passivity, which may be preceded by panicky preoccupations of various kinds may well be considered the *essence of the schizophrenic individual*. There is in most instances an increasing monotony of experiencing and lack of flexibility in dealing with life situations. The majority of them do not appear to suffer under this passivity though for a while they may attempt to mask it by appearing busy or interested in special projects. Sometimes anxiety about the passivity leads to paranoid elements in their interpersonal relationships. Wyrsh has emphasized that most of these patients—particularly those with the actual diagnosis of "schizophrenia simplex"—are unconcerned about being in a blind alley. They may blame others, become hypochondriacal or quarrelsome, but they do not seem to worry about their insufficiency.

Schizophrenia is not a way of experiencing or a way of existence (*Daseinsweise*) but a nosological concept, a disease. It was formulated by the use of clinical, nosological methods. It may be investigated further by following the well-defined avenues of scientific research, from the clinical to the biochemical. As applied to this particular problem, it is true they are in need of considerable refinement.

On the other hand, the experiences and the way of existence of the schizophrenic may be approached psychologically or sociologically, and, with discrimination, philo-

sophically. To what extent these methods will lead in the development of a psychotherapy for schizophrenics is debatable.

We have attempted a separation of schizophrenia and the schizophrenic which may seem artificial. In fact, we *are* dealing with two different topics and, most definitely with different approaches. Many an error and many a misunderstanding could have been avoided if here—as elsewhere—the disease and the patient had been approached from appropriate and distinct viewpoints. We still try to find physiological therapeutic methods to combat schizophrenia. They are not sufficient for the physician who is faced with the schizophrenic and who desires to help his patient find a way through a greatly disturbed life. It will depend as much on

the assets and liabilities of the physician as on those of the patient which manner of treatment—of personal, psychological treatment—is chosen. The physician is not an unchangeable figure in the relationship which develops during the therapeutic procedure. He must become aware of changes in himself and in his patient, and also of the patient's concern for these changes. This, it seems to us, is one of the notable advances made since the culmination of the descriptive clinical period. Description alone does not suffice; an increasingly keen awareness of the dynamics, using the term in the very broadest sense, is always needed. This progress, vital as it is, could not have been accomplished without the foundations of clinical psychiatry laid down by Kraepelin

BREATHING DEFICIT, ALLERGY, AND ALCOHOLISM

NORMAN G. HAWKINS, PH. D.¹

During a series of interviews with alcoholic tuberculosis patients it had been noted that physical disabilities were often discussed, the more frequent being sinusitis, broken noses resulting in defective breathing, and other ailments concerning the respiratory tract. No systematic record of these matters had been kept, but at one point 5 highly similar cases called attention to some interesting facts. These 5 were all from the lower socioeconomic level, 4 had tried Alcoholics Anonymous and failed, all had appeared at first to be cooperative patients and then had exhibited unpredictable and exasperating behavior. They also showed in marked degree the insomnia, tension, hopelessness, and accident proneness mentioned by Bacon (1). Four had deviated nasal septa, the alcoholism in each of these had apparently developed after the nasal trauma, and in 3 cases both breathing difficulty and bizarre behavior subsided following antihistamine therapy. Further analysis of these cases showed that at times alcohol had been used consciously as a sedative and analgesic.

One case which illustrates well the relationship of bodily and psychological elements is that of a 51-year-old foreign male who had lost his father at 3 years of age. He was divorced, had only 7 years of schooling, and had never done anything except unskilled labor. The clinical history reads in part:

Since his pneumonia he has had intermittent episodes of pleuritic type chest pain which migrates from one side to the other and these have progressed within the past few months.

Over the past 6 months or so he has noted some exertional dyspnea and 3 months prior to admission he voluntarily and quite suddenly quit drinking. Since that time, he states that despite a fairly good appetite, he has suddenly lost weight in the amount of 25 lbs. He had increasing weakness and shortness of breath. A friend advised him to take some blood tonic, which he did. Subsequently about a month ago he developed postprandial cramps and watery diarrhea. . . .

The patient states that he has always been in fairly good health and his only operation was for sinus trouble 4 years ago. . . .

The patient arrived at the sanatorium with far

advanced tuberculosis, indicating that the disease had been progressing for some time before he finally gave up drinking. His nasal septum was badly deviated. Chronic rhinitis and allergic nasal tissue were demonstrated by the otorhinologist. Frequent medication for colds was required while he was under treatment for tuberculosis. The left nostril was consistently blocked. After 6 weeks he began complaining of nausea, vomiting, constipation, severe abdominal pains, and other signs which physicians found equivocal in meaning.

He was ordinarily cooperative, courteous, and very presentable. When his physical discomforts became numerous, however, he displayed intransigent and unmanageable behavior. On two such occasions he drank heavily and afterward appeared calm. Nevertheless he expressed a strong desire to abstain from drink.

Following medication with antihistaminics and sedatives the physical distress of this patient cleared up. At the same time his contentious behavior and his compulsion to drink disappeared and he had remained calm thereafter for 11 weeks. Part of this result was undoubtedly due to the fact he was no longer tormented by insomnia. When questioned about sleeplessness he recalled increasing difficulty during the early twenties. He also recalled his first sinus trouble and colds at about that age. From the late twenties to his early forties he could not recall being seriously bothered.

The possibility in this case and less clearly in others, of a respiratory defect and related allergic conditions setting in motion a cycle which interfered with physical, emotional, and finally social performance, was intriguing in view of some scattered observations concerning alcohol.

At one time alcohol was used in Europe in the treatment of tuberculosis, and it has been used widely and with good results in easing the pains of childbirth. Two generations ago it was a common remedy for acute respiratory infections and is still employed in some areas for the relief of asthma. The observations by Cathell (2) are pertinent here, as a number of his patients exhibited respiratory and allergic tissue changes. Stern (3) has reported decreased craving and increased tolerance in a few cases treated by pyrilamine maleate, but apparently without enduring effects. A very extensive analysis by Randolph (4) touched upon such allergic condi-

¹ Asst. Prof. Div. of Med. Sociology, University of Texas Medical Branch, Galveston, Tex.

tions as food dyscrasias, rashes, and respiratory complaints (e.g., rhinitis and asthma).

As a result of these case observations and the few indications concerning alcohol and alcoholism which seemed applicable, it was hypothesized that respiratory distress either allergic in nature or with related allergy is associated with alcoholic careers.

METHOD

In order to investigate the hypothesis, the records of discharged tuberculosis cases (numbering approximately 6,000) from Firland Sanatorium in Seattle were first classified by sex and by the presence or absence of the diagnosis of alcoholism and all cases under 25 years of age eliminated. The 4 classes were then sampled, 25 from each, using the random tables by Edwards(5) applied to the file numbers.

The records of the 100 discharged patients were investigated for evidence of the following: remarkable frequency or severity of colds, sinusitis or chronic postnasal drip, nasal obstruction, asthma, hay fever, deviated septum, and allergic nasal tissue. Gastric and skin allergies were tabulated for comparison. In all instances there were 2 criteria of evidence, either a notation in the clinical history at the time of admission or subsequent findings by consultant specialists. These clinical judgments were ordinarily verified by objective procedures, but in any case the records were taken as conclusive.

The data were treated by Chi-square. Each comparison was dichotomized as a fourfold table, so the Chi-square calculations were in instance corrected for continuity. Phi-coefficients of association were computed from significant Chi-square values.

FINDINGS

Table 1 shows the incidence of respiratory complaints by sex, age range, and alcoholic diagnosis. A total of 49 had one or more of the types of respiratory complaint. The sex comparison produced a Chi-square of 1.44, the age comparison a Chi-square of 0.60, and the diagnostic division a value of 19.37; the first and second were not significant at the .05 level while the last was significant at the

TABLE 1

OCCURRENCE OF RESPIRATORY COMPLAINTS BY SEX, AGE RANGE AND ALCOHOLIC DIAGNOSIS AMONG TUBERCULOSIS PATIENTS¹

	Cases	Any complaint ²	Multiple complaints ³
Males	50	28	8
Females	50	21	6
Under age 45	40	22	7
Age 45 or over	60	27	7
Alcoholics	50	36	13
Nonalcoholics	50	13	1

¹ Data from clinical records and progress reports of a random sample of 100 discharged cases, stratified by sex and diagnosis, from Firland Sanatorium, Seattle.

² At least one of the following: remarkably frequent or severe colds, sinusitis or postnasal drip, deviated septum, asthma, hay fever, or allergic nasal tissue; as noted in discharge records.

³ Three or more of the complaints enumerated above.

.001 level. The Phi-coefficient of association between alcoholism and one or more complaints was 0.44 (approximately equivalent to 0.60 for Pearsonian correlation). For multiple complaints the sex and age comparisons were again insignificant but the diagnostic distribution produced a Chi-square value of 10.09, significant at the .005 level, and a value of 0.32 for the Phi-coefficient.

The alcoholics and nonalcoholics were compared on individual complaints as well. Sinus trouble was suffered by 26, of whom 18 were alcoholics. The difference showed a Chi-square of 4.21 (significant at the .05 level) and a value of 0.20 for the Phi-coefficient. Colds notable for frequency or severity were recorded in the histories of 31 and 25 of these were alcoholics; a Chi-square of 15.15 (significant at the .001 level) and Phi-coefficient of 0.39 were yielded by this comparison. Hay fever, asthma, and allergic nasal tissue were too infrequent for analysis as only 7 alcoholics and 2 nonalcoholics had histories of those ailments. Deviated nasal septum was found among 11 alcoholics and 2 nonalcoholics. This comparison gave a Chi-square value of 5.69 (.05 level of significance) and Phi-coefficient of 0.24. The same figures and same resulting statistics applied to nasal obstruction, but deviated septum and obstruction were not invariably coexistent.

Respiratory allergy was then compared with the incidence of gastrointestinal and skin allergies. The data are shown in table 2. A total of 15 alcoholics and 4 nonalcoholics had one or both. The comparison of "other"

TABLE 2

PREVALENCE OF CERTAIN ALLERGIC CONDITIONS¹ AND
MEAN AGES AMONG ALCOHOLIC AND NON-
ALCOHOLIC TUBERCULOSIS PATIENTS

	Alcoholics	Non- alcoholics
Respiratory only ²	5	2
Other only ³	8	2
Both types	2	—
Neither	35	46
Mean age	41.5	44.1

¹ Data from clinical records and progress reports of a
random sample of 100 discharged cases, stratified by sex
and diagnosis, from Firland Sanatorium, Seattle.

² At least one of the following: hay fever, asthma, or
allergic nasal tissue by diagnostic standards.

³ Gastrointestinal or skin allergy by diagnostic standards.

allergies (including the "both" category) yielded a Chi-square of 4.67 (significant at the .05 level) and the 2 classes combined had a value of 6.71 (significant at the .01 level). The Phi-coefficients were 0.19 and 0.26 respectively. Allergies, then, were of the same order as deviated septum and nasal obstruction in typifying the alcoholics.

Those having 2 or more allergic complaints, numbering 24, were then classified as to whether they also exhibited allergies. The total sample produced a Chi-square of 5.44 and Phi-coefficient of 0.23 of association between respiratory conditions and allergy; the corresponding figures were 4.84 and 0.22 for alcoholics. In the comparison of sinus trouble and allergy there was a Chi-square of 18.17 (significant at the .001 level) and Phi-coefficient of 0.43 for all cases and a Chi-square of 3.89 (significant at the .05 level) and Phi-coefficient of 0.27 for alcoholics. Allergy was distributed according to chance among those with remarkable histories of colds and other cross-classifications were too small for analysis.

DISCUSSION

The study was conducted in retrospect. It is quite possible that a team of clinicians, starting with the research goal in mind, and making independent observations, would have reached quite different ends. On the other hand it is not likely that a diagnosis of alcoholism caused a variety of observers over a period of several years to perceive systematically in the manner indicated by the results. As to the diagnosis of alcoholism it-

self it is true that standards vary, but experience at Firland has indicated that there is a consistent tendency toward underenumeration, so that a rigorous classification could be expected to produce more marked distinctions.

There is also the possibility that other disorders such as venereal disease, peptic ulcer, and various cardiovascular ailments would distinguish alcoholics even more than those studied. No such data would invalidate the study, but there were other cogent reasons for not extending the analysis. The list of possible alternatives is very long. Furthermore, many disorders are not as easily investigated as respiratory complaints and not as likely to have been consistently noted by specialists in the treatment of tuberculosis.

Assuming that the data did not contain some artifact, there are still several possible interpretations. The association seen may apply only to those alcoholics who become tuberculosis patients, or possibly those having any complication of a chronic nature. Since the distribution of the ailments studied in the general population is not known, it could be that alcoholic tuberculosis cases are normal and others are below normal. Or it may be that the situation applies only to one social level of alcoholics, as tuberculosis is definitely a disease of the skid road area and of high prevalence in jails and similar institutions.

In addition to these qualifications of the findings, the study revealed nothing about sequence or about the way physical complaints may have interacted with psychological factors. The case records could not be used to show how many alcoholics may have had one or more of the complaints prior to pathological drinking and how many may have been pathological drinkers first. It may be that in the majority the two went hand in hand. Alcoholism could easily increase the frequency of colds or their severity. A deviated septum is ordinarily the result of a blow and hence could be expected more frequently among alcoholics.

In spite of these limitations the hypothesis was tenable under the circumstances in which it was tested. The investigation of some cases under treatment at the time indicated at least the possibility that breathing

deficit had occurred either early in the alcoholic career or prior to its beginning. It is this fact which makes the hypothesis worthy of further investigation.

It has been noted by Manson (6), Williams (7), and Tiebout (8) that anxiety and tension are characteristic signs of alcoholism. Williams and Tiebout were in agreement that psychophysical symptoms had caused heightened anxiety and tension preceding the onset of pathological drinking. Anxiety is precipitated by fear of something which is unavoidable, inescapable, or insoluble. There is nothing more potent in this respect than a perceived threat to one's oxygen supply. On the other hand anxiety and tension react upon the breathing apparatus in a fashion which intensifies existing defects. It has been demonstrated by Holmes, Goodell and Wolff (9) that psychic stress affects the nose so as to display the typical appearance of allergy. The effects of anxiety upon asthmatics are well known. Fear of the loss of air is typical of anxiety and this fear in turn increases tension and makes breathing more difficult. Eventually the victim faces the dilemma of something completely unavoidable and at the same time unendurable.

In such a situation Holmes and Ripley (10) have indicated that responses are aimed at removing the discomfort rather than at achieving normal, socially valued adjustment. Alcohol presents the ideal solution. Lowenbach and Suitt (11) reported lasting improvement in a number of anxiety cases immediately following the experimental administration of alcohol. Goldmann and Luisada (12) obtained very good results in controlling lung edema (a dangerous and frequently fatal condition) with high concentrations of alcohol in oxygen. They emphasized the sedative and anxiety-reducing qualities of the vapor. Alcohol has been used many times in the postoperative care of surgery cases, and injection into the blood stream improved the results of nasal surgery for Cottle, Fischer, and Loring (13). They described it as reducing anxiety and irritability and producing euphoria, sedation, hypnosis, and analgesia in controlled dosages.

A possible explanation of why anxiety-reduction technique is applied to a gradually

widening range of situations appears in the study by Ausubel, Schiff and Goldman (14). They found that people with a consistently high anxiety level placed unusual dependence upon familiar and stereotyped responses and thus failed to adapt to novel situations. In a condition of chronic discomfort and anxiety which must be reduced regardless of social consequences, it is not difficult to conceive of this stereotypic tendency introducing a pattern of learning and reinforcement with reference to whatever agent produces personal comfort.

SUMMARY

Cases of alcoholic tuberculosis patients presented some instances of a history of physical complaints which gave rise to the hypothesis that respiratory defects and allergy are associated with alcoholism. The hypothesis was investigated in a random sample of discharged cases from Firland Sanatorium in Seattle, numbering 100 and evenly divided by sex and with reference to alcoholic diagnosis.

Alcoholics were significantly distinguished by one or more of a selected list of respiratory complaints, by a multiplicity of them, by the more individually frequent of them, and by gastrointestinal and skin allergies. Respiratory complaints and allergies were associated among alcoholics and nonalcoholics alike, particularly sinusitis.

Assuming these findings to be valid for at least some alcoholics, a theoretical explanation is suggested. Respiratory difficulty and anxiety are mutually and cumulatively interrelated in causative fashion. Both are relieved by the use of alcohol. Acquiring this sort of relief from a chronic condition gradually takes precedence over a widening range of activities.

BIBLIOGRAPHY

1. Bacon, S. *Fed. Probation*, 11: 3, 1947.
2. Cathell, J. L. *North Carolina M. J.*, 15: 503, 1954.
3. Stern, M. M. *J. Nerv. & Ment. Dis.*, 122: 198, 1955.
4. Randolph, T. G. *Quart. J. Stud. Alcohol.*, 17: 198, 1956.
5. Edwards, A. L. *Experimental Methods in*

- Psychological Research. New York: Rinehart, 1950.
6. Manson, M. P. *Quart. J. Stud. Alcohol.*, **9**: 175, 1948.
7. Williams, E. Y. *Psychiat. Quart.*, **24**: 782, 1950.
8. Tiebout, H. M. *Quart. J. Stud. Alcohol.*, **12**: 52, 1951.
9. Holmes, T. H., Goodell, H., and Wolff, H. G. *The Nose: Experimental Study of Reactions Within the Nose in Human Subjects During Varying Life Experiences*. Springfield: Charles C Thomas, 1950.
10. Holmes, T. H., and Ripley, H. S. *Am. J. Psychiat.*, **111**: 921, 1955.
11. Lowenbach, H., and Suit, R. B. *Alterations of Anxiety Subsequent to Physical Treatment of Psychiatric Disorders*. In Hoch, P. H. and Zubin, J. (eds.) *Anxiety*. New York: Grune & Stratton, 1950.
12. Goldmann, M. A., and Luisada, A. A. *Ann. Int. Med.*, **37**: 1221, 1952.
13. Cottle, M. H., Fischer, G. F., and Loring, R. M. *J. Internat. Coll. Surgeons*, **24**: 117, 1955.
14. Ausubel, D. P., Schiff, H. M., and Goldmann, M. J. *Abn. & Soc. Psychol.*, **48**: 537, 1953.

SCHOOL PHOBIA: A STUDY IN THE COMMUNICATION OF ANXIETY¹

LEON EISENBERG, M. D.²

Psychiatric efforts to understand the meaning and genesis of neurotic behavior begin with the painstaking task of reconstructing a reliable version of the patient's previous life history from the accounts he and his relatives provide. We soon learn—as Freud disconcertingly discovered—that the emotional involvement of the participants distorts the very process of anamnesis. This leads us to attend to the behavior of the patient and his relatives toward the psychiatrist. The sample of behavior in the office, termed transference or parataxis, is presumed to be representative of other interpersonal transactions, though it is clearly a very special kind of interpersonal relationship, not immediately equivalent to any other. Both of these sources, case history and interview, valuable though they are, fail to provide the direct data of observation that might verify or contradict the dynamic hypotheses we erect to account for the origin of disturbed behavior. We are in search of the specific patterns of verbal and non-verbal communication *within the family unit* that give rise to the patient's symptoms.

It may be of interest, therefore, to report direct observations of parent-child interaction that bear directly upon the source of a particular syndrome of neurotic behavior: school phobia. The mode of relationship was available for study at the very juncture when the symptoms were *in statu nascendi*: the moment of separation. The drama could be seen as it unfolded rather than having to be reconstructed from the incomplete and colored versions offered by the actors in terms of their experience of it and their attitudes toward the auditor. In this way recurrent psychotherapeutic encounters with parental ambivalence were thrown into bold relief by observation of the critical role it played in the interaction between parent and child.

The communication patterns that could be significantly related to the onset and perseverance of this specific syndrome may be pertinent to an understanding of the origins of neurotic behavior in children.

THE CLINICAL PROBLEM

Children with school phobia are coming to psychiatric attention with increasing frequency. In a survey of the last 4,000 admissions to our clinic, the incidence was noted to have risen from 3 cases per 1,000 to 17 cases per 1,000 over the last 8 years. It is difficult to ascertain whether this reflects a real change in incidence or merely in recognition and referral from physicians and school authorities, the latter hypothesis representing the more likely explanation. Presumably, in former years such problems were handled by the truant officer or the children were made invalids at home by certificate of the family physician.

At the outset of this discussion, it is essential that school phobia be distinguished from the far more common problem of truancy. The truant, as a rule, has been an indifferent student. He cuts classes on the sly and spends his time *away from home*, frequently for antisocial purposes. He is likely to be a rebel against authority and usually stems from the lower socioeconomic strata of the community.

The phobic child, on the other hand, urgently communicates to his parents his inability to go to school and is usually unwilling to leave home at all during school hours. Most commonly, he is of average or better intellectual endowment and has done well academically prior to the onset of his neurotic symptoms. His difficulty may present itself frankly as fear of attending school or may be thinly disguised as abdominal pain, nausea and vomiting, syncope—or the fear of nausea or syncope in school. Frequently the child is unable to specify what he fears. At times, if pressed, he may offer a rationalization of his behavior in terms of a strict

¹ Read at the 113th annual meeting of The American Psychiatric Association, Chicago, Ill., May 13-17, 1957.

² The Children's Psychiatric Service, The Johns Hopkins Hospital, Baltimore 5, Md.

teacher or principal, unfriendly classmates or the danger of failing. The incidents that may be blamed for provoking the reaction do not differ in kind or intensity from those most children experience at some time during the course of schooling. Moreover, the correction of the apparent difficulty by change of classroom, reassurance of passing, etc. is conspicuously unsuccessful in resolving the problem. In general, the longer the period of absence from school before therapeutic intervention is attempted, the more difficult treatment becomes.

Systematic study of these children reveals that, almost without exception, the basic fear is not of attending school, but of leaving mother or, less commonly, father. Johnson and her collaborators (1, 2) have suggested, therefore, that these cases be classified as separation anxiety and that the term school phobia be discarded. We have no argument with the contention that this group of cases constitutes a clinical variant of separation anxiety (3). The older term, however, has not only the merits of historical priority and wide clinical usage, but as well the useful function of serving to emphasize clinical symptomatology that must be the first target of therapeutic efforts. That is, the key to successful treatment lies in insistence on an early return to school for older children or the introduction to a therapeutic nursery school for the younger; left at home, the patient is further isolated from his peers, multiplies his anxiety about returning, is trapped in the vortex of family pathology and is reinforced to persist in infantile maneuvering by the "success" of his efforts.

SOURCES OF THE CLINICAL DATA

The findings to be summarized are based upon 2 groups of patients, totaling 26 cases. The first group comprised 11 children, 6 boys and 5 girls, of pre-school age, who were treated for separation problems at the Children's Guild, a specialized nursery school for emotionally disturbed children. The second group, 7 boys and 3 girls in elementary and 3 boys and 2 girls in junior high or high school, were studied in outpatient therapy, mostly at the Children's Psychiatric Service. On each of the patients, a thorough

initial psychiatric evaluation was performed; in most cases, supplementary information was obtained during the course of psychotherapy. In the children attending nursery, careful observations were made of the behavior of child and mother during the initial period when mother was invited to be present and particularly during the transitional period when separation was accomplished. As we became aware of the significance of the interaction patterns that were noted in the younger group, we were alerted to waiting room behavior before and after therapeutic interviews and inquired more closely about parental actions during efforts to get children to school.

While the specific problems in no two families were identical nor were precisely the same behavior patterns exhibited during the moments of separation, an intense ambivalent relationship between parent and child was present in every case, with separation as difficult for the parent as for the child. In 24 of the cases, the nuclear problem for the child lay in his relationship to his mother, in 2 to his father. There would seem to be little purpose in statistical enumeration; rather, illustrative case synopses and representative anecdotes of separation behavior will be presented as exemplary of the dynamic factors evident in each case, but in varying intensity.

PARENT-CHILD INTERACTION DURING SEPARATION

During his first days at the Guild, the typical child remained in close physical proximity to his mother. Attracted to group activities despite himself, he could be seen oscillating toward and away from the play area. As he began to look less and less in his mother's direction and to enter tentatively into the nursery program, his mother was noted to move from her now peripheral position in order to occupy a seat closer to her child. The umbilical cord evidently pulled at both ends! Periodically the mother intruded herself into the child's awareness on the pretext of wiping his nose, checking his toilet needs, etc., each such venture being followed by his temporary withdrawal from the group—much to her dismay.

As trial separations were begun by having the mother move into an adjacent room after telling her child, several mothers jeopardized a previously successful transition by finding it "necessary" to return to the play area. When the director suggested actual departure, the mothers responded with an admixture of indecisiveness, apprehension and resentment. One anguished mother, literally led out by the hand, commented, "The least I can do is keep my feet moving." Another bid her twins goodbye with many reassurances of her early return. They played on unconcerned. She stopped again at the door to assure them they had nothing to fear. They glanced up but played on. Having gotten her coat, she made a third curtain speech in a tremulous voice, "Don't be afraid. Mommy will be back. Please don't cry." This time one of the twins got the cue and cried till she left. Another mother, after two farewells without responsive anguish in her daughter, turned to the teacher bitterly, "How do you like that! She doesn't even seem to care!" A fourth mother, tearing herself away from a whining daughter, took her departure with this parting shot, "Miss Sally (the teacher) says I *have* to go." Once gone, the mothers spent an unhappy hour or two, returned almost invariably before the time agreed upon and greeted their children effusively with unsolicited reassurances and anxious questioning about how they had fared.

In dealing with the school aged children, similar, though usually more subtle, phenomena were evident. On the first clinic visit, the psychiatrist might be told in the child's presence "you won't be able to get him to leave me." At that very moment, mother would tighten her grip on the child's hand or about his shoulder. During the interview, she was constantly on the alert for the sound of his voice or footsteps. If he did enter to ascertain her whereabouts, she was conspicuously ineffectual in getting him to leave. When mother and child had to be seen together, she answered for him and constantly catered to his demands, although in an exasperated fashion. A Binet under these circumstances would likely result in a composite I.Q. for the two!

We, of course, were not able to observe

the actual school going behavior but obtained accounts dynamically equivalent to what had been observed in the nursery setting. One father reported during the course of treatment that on the day his son had agreed to begin his return to school, his mother wondered aloud whether it might not be wiser to wait a day since it was raining and he might catch cold. When the youngster insisted he should keep to his agreement, the mother suggested she consult his father. Called at his office, the father responded with an exasperated "of course he should go!" Whereupon, the mother turned to the patient and stated, "Your father thinks it's raining too hard." Another mother reported that her son, who had finally been gotten back to school for a week, had been absent the 3 days prior to the clinic visit because he lacked rubbers and there had been a heavy snow. This seemed not unreasonable until we learned from the patient that he had been out sledding each of those 3 days!

In one of the two cases where the father played the cardinal role, the following description was offered by his wife. When the morning for return to school arrived, the patient responded with his customary complaints of nausea and abdominal pain. After a few incoherent attempts to insist that his son must go, his father broke into tears, shouted "My God, I can't do it" and tore off to the bathroom to vomit. When the mother called me at 7:30 a.m., in a state of considerable agitation herself, I could hear the lamentation of the men in the family in the background. In the second case, the father was so distressed by his son's morning behavior that he had to be excused from his legal duties, couldn't eat and spent an agitated day—all this at a time when the patient was contentedly watching television at home.

THE PARENTS

Without exception, the mothers were anxious, and ambivalent. Each gave a history of a poor relationship with her own mother; most were currently in the throes of a struggle to escape the overprotective domination of a mother or mother-in-law who visited daily, insisted on frequent phone

calls and was constantly critical. Pregnancy had usually been regarded as a mixed blessing, childbirth was feared. The infant had been surrounded by apprehensive oversolicitude and had never been trusted to baby-sitters, at least outside the immediate family. As the child ventured forth from his home, he was constantly warned of hazards. As one mother phrased it, "I thought it was better to frighten my Joey than to lose him."

The dynamic forces in the mother-child relationship were quite complex. Several of the mothers had responded with primary overprotection to a child who had been a late arrival after many sterile years. Others saw the child in terms of their own pathetically unhappy childhood and reexperienced with each of the child's tears remembered moments of loneliness and misunderstanding. But, inevitably, the children's strivings for independence and self-gratification led to feelings of personal rejection and reactive hostility. "After all I've given her! How can she treat me like this?" was a typical expression.

Lacking emotional fulfillment in their marital relationships, many of these mothers turned to their children. On the one hand, the marriage yielding little, the child had to be both child and lover. On the other, he was resented as the hostage by whose presence the mother felt trapped. This anger, prominent in most cases, led to reactive guilt and secondary overprotection. These mothers could not let themselves experience the resentment normally aroused by difficult behavior and consequently had difficulty in setting limits. As the child, accustomed to having every whim gratified, finally drove her to exasperation, her explosion, disproportionate to the precipitating incident, would lead via guilt to another cycle of overindulgence and latent resentment.

Dependent and anxious as these mothers were, they found little support from their husbands. We found no instances of overt infidelity, but many of the fathers were more strongly wedded to occupational interests than to their wives. They tended to be more effective with the children when they troubled to take an interest, but usually confined themselves to disgruntled criticisms of

their wives' inadequacies. Of the two fathers mentioned earlier, one had suffered from an unusually sadistic relationship with his own father and was attempting to provide and, at the same time, experience vicariously through his son, the kind of fathering he had missed and still searched for. His efforts to spare his son any unhappiness had been accelerated by a mild attack of poliomyelitis in the boy. The other father, as far as could be determined from a brief contact, had been tremendously affected by the sudden death of his own brother at 17, for which he felt responsible.

PARENTAL ATTITUDES TOWARD THERAPY

The ambivalent attitudes so evident between parent and child overflowed into relationships with the psychiatrist, the case worker and the teachers. One unusually blatant example may serve to dramatize the ever present rivalry between these mothers and those to whom they appealed for help to wean their children away from them.

Mrs. L., "devoted" to her own hypochondriacal mother whom she feared to leave lest "something happen to her," married late in life a pleasant but ineffectual husband whom she completely dominated. Successful as a career woman, she commented, "I never thought I wanted marriage or children. Now I can't even think of leaving them." She reported her daughter's lack of interest in the nursery with evident satisfaction and did her best to insure that the school would have little special to offer by duplicating games and equipment at home. She told the nursery director one day, "You know my daughter really doesn't like you very much. In fact, the only nice thing she says is that you have a nice complexion." At this point, she leaned over, scrutinized the director's face, and added, "And I don't see what's so nice about *that*!"

Whereas advice was sought with an imploring and almost desperate air, it was usually received with, "and what do I do when that doesn't work?" There can be little doubt that this anticipation of failure effectively undercut whatever measures might have been taken. That the overdependence of the child had positive values for the mother was often pointed up by the disappointment and even resentment shown to the therapist when the child made strides out on his own.

THE CHILDREN

Without exception, these children were of normal or superior intelligence. Those with prior school attendance had not been singled out by school authorities as deviant in any way. Their parents described them as having been sensitive to change, even as infants, and as fearful of new situations. Yet, pathetic and frightened as they might appear on arrival when separation was first attempted, they became remarkably free from anxiety once the therapist had won their confidence, usually in the first interview. In the younger children, intrinsic psychiatric disturbance was far less prominent than neurosis in their parents. The one significant exception was a child who conformed to Mahler's description of a symbiotic psychosis(4). In the adolescents, intrafamilial pathology had been translated into intrapsychic.

An element of infantile manipulation, at times more prominent than anxiety, was evident in the child's behavior. Richard, at 3½, had so successfully trained his mother that the merest cloud of dissatisfaction lowering over his face would send her into frantic activity to offset an impending tantrum. Eddie, at 10, needed only to whine and his father would purchase gifts beyond his means. Lisa, 6, was clearly involved in a vendetta of punishment for her mother's sin of leaving her for a vacation. Wendy, 3, had learned to arouse guilt and anxiety in her mother, who had been hospitalized twice, once post-partum, with the deliberate comment "you liked to go to the hospital" whenever mother attempted to leave. Arlene, 8, went to school without a murmur when staying at her grandmother's house but couldn't be budged from her mother's.

There would seem to be a line of demarcation, however, at about the junior high school level. The 5 adolescents were, as a group, far more disturbed. In this we agree with Suttentfield(5). Kathy, 15, tied to a chronically anxious mother, developed a fear of fainting at school or in crowds and retreated to a symbiotic relationship essential to both: interestingly, her mother had quit high school herself for the very same reason. Fear so strong as to overcome the need for conformity and the striving for independence

in the adolescent implies a greater degree of illness than it does in the younger child who is normally more dependent. One might suppose that the chronic action of the forces we have identified in the families of the younger children had ultimately warped personality growth beyond the hope of ready change.

THE PATTERN OF SYMPTOM FORMATION

The configuration of psychic forces that generates separation anxiety has the following attributes. There is a background of overdependence on the mother (or father) almost consciously fostered by the parent in response to her needs rather than the child's. At the same time, the child's parasitic clinging is resented by the mother as it impinges on her own freedom of movement. Superimposed is hostility toward the child stemming from sources not in immediate awareness: the child as an image of a resented husband, as bond to an unwanted marriage, as symbol of a hated sibling, etc. Secondary to this is guilt and compensatory overprotection. The child responds as well to the rejection he can sense as to the indulgence in which he luxuriates.

This supersaturated atmosphere is precipitated out by some transitory situation which arouses anxiety: illness, change of school, harsh word from a teacher, etc. At a time when the support of firm handling is needed, the child's anxiety is multiplied by the sight of a distraught and decompensated parent. Maternal apprehension makes quavering the voice and tremulous the gestures that accompany empty verbal assurance. It is as if the children are told by nonverbal communication that what lies ahead is even more frightening than they had dared think—a kind of *folie à deux*.

The child's symptoms are comprehensible as the response to contradictory verbal and behavioral clues. He is told that he must go at the same time that he is shown he dare not; he is told that he is loved at the same time that his needs are lost in the morass of his mother's. The mother is unwittingly sabotaging her own ostensible goals as she struggles in the relentless grip of ambivalent feelings. The child, in response to felt hostility, strikes back by displaying the behavior that he senses will be most disconcerting to

her. Anxiety is aroused when the latent (behavioral) cue to the child is rejection or fear; manipulation is activated when the latent cue is the possibility of gratification. The contradiction between words and behavior in the transactions between mother and child is the catalytic agent in generating separation anxiety. The history of early sensitivity to change in these children as infants suggests that an intrinsic anxiety proneness may exist which renders them more susceptible to the acquisition of these patterns. Certainly, they are not exhibited by all children who may grow up in dynamically similar family situations.

TREATMENT

The therapeutic corollary to this conception of the genesis of symptom formation is an insistence on early return to school. At the initial psychiatric consultation—made if necessary on an emergency basis for the school-aged child—an attempt is made to identify the etiologic factors and to assess the degree of sickness in family members. The parents are given the reassurance that the prognosis is relatively good and the main dynamic features they are deemed capable of assimilating are pointed out. A program for rapid return to school is outlined. Often this can be negotiated with the child once it is made clear to him that school attendance is prescribed by law and that the issue is not whether he will return but how and when. If necessary, he may be permitted to begin by spending his day in the principal's or counsellor's office or by having his mother attend class with him, but he must in any event be in the school building(6). We have, on occasion, when a thorough trial of other methods has failed, gone so far as to schedule a hearing in juvenile court—which did not have to take place—in order to shore up ineffectual parents. One father, indeed, decided on his own to call in police officers to convince his son (and himself) that he meant business. Once return has been achieved, therapy continues with the family in order to eradicate underlying pathological attitudes. Obviously, these structures do not apply to the pre-school child for whom a nursery program can be introduced gradually on an elective basis.

Our results confirm the practicability of

this plan. Not one child has been precipitated into panic or has gone into psychic decompensation as some might have expected. Ten of the 11 pre-school children and 10 of the 10 elementary school children have returned to and are still in school. Results have been far less impressive in the junior high and high school groups. Only 1 or possibly 2 are now attending school regularly; the remaining 2 have been in and out and as of this moment have a questionable outlook; 1 is definitely a therapeutic failure.

These results contrast with a situation uncovered in a recent survey of children in Baltimore on home teaching for medical reasons(7). Of 108 children taught by visiting teachers, 8 elementary school pupils were discovered to be on medical certificates for school phobia. Consequently, no effort had been made to insist on attendance. All had been out for it least 1 year and one as long as 3 years. This points to the unwisdom of recommending home teaching which makes the situation far too comfortable for the whole family and removes a major motivation for change. By accepting the apparent inability of the child to attend as a real inability, it reinforces his regression. The insistence on attendance, on the other hand, conveys to the child our confident expectation that he can accept and carry through a responsibility appropriate to his age.

The objection may be raised that we have produced a symptomatic cure but have not touched the basic issues. It is essential that the paralyzing force of the school phobia on the child's whole life be recognized. The symptom itself serves to isolate him from normal experience and makes further psychological growth almost impossible. If we do no more than check this central symptom, we have nonetheless done a great deal. Furthermore, we have been impressed with the liberating role of this accomplishment in opening avenues for rapid progress in both child and parents in subsequent treatment. The psychiatric task is, of course, not complete when return is accomplished, though it is sometimes so regarded by the parents. Every effort should be made to follow through with family oriented treatment.

SUMMARY

School phobia has been shown to be a variant of separation anxiety. Direct observa-

tions of transactions between parents and children at the time of separation have been presented. Key dynamic factors have been identified and the mode of symptom formation has been outlined as a paradigm for the genesis of neurotic behavior. The outcome of a treatment program has been reported in validation of the theoretical conception of the nature and genesis of the disorder.

BIBLIOGRAPHY

1. Estes, H. R., Haylett, C. H., and Johnson, A. M.: *Am. J. Psychotherapy*, 10: 682, 1956.
2. Johnson, A. M., et al.: *Am. J. Orthopsychiat.*, 11: 702, 1941.
3. Kanner, L.: *Child Psychiatry*. 3rd Ed. Springfield: C. C. Thomas, 1957.
4. Mahler, M. S.: *Psychoanalyt. Stud. Child*, 7: 286, 1952.
5. Suttentfield, V.: *Am. J. Orthopsychiat.*, 24: 368, 1954.
6. Klein, E.: *Psychoanalyt. Stud. Child*, 1: 263, 1945.
7. Hardy, J. B. Personal Communication.

DISCUSSION

GEORGE PERKINS, M.D. (Chicago, Ill.)—This paper presents an approach to school phobia in which observations are made of the parent-child relationship (particularly the anxieties and ambivalences) at the time the parent takes the reluctant, phobic child to school.

In my remarks, I wish to dwell on therapy and research which is based on a technique of *observations of parent-child relationship*. For interesting as this paper's observations are on school phobias, this particular technique, I believe to be also most interesting and important.

You will remember that the work on school phobias first referred to in this paper is the pioneering research by Szurek, Adelaide Johnson, and Falstein using the collaborative approach. The therapist of the mother and therapist of the child got together frequently to compare notes and to further the help of each. Szurek and Johnson were amazed at how the mother's moods and material were invariably reflected in the child's behavior and concerns. The two obviously were connected in certain causal ways—especially regarding the mother's influence on the child—and each made more sense in terms of the other's material. Thus, a research method was devised, which even today is not sufficiently exploited for purposes of understanding the child's behavior. We have a way of finding out in detail about the past and present attitudes of the mother, as reflected in her sessions. These are crucial in their bearing on the child's reactions. Szurek, in his obesity study in the hospital and later, Adelaide Johnson, in her study of the perversions and schizophrenia, have again made remarkable use of this approach.

But as the author brings out at the beginning of this paper, a *report on behavior* in sessions which assess the emotional states of two parties of a relationship is valuable and valid but still does not always yield the same data or impact that *direct observation* of these people, in crucial situations, might yield.

This last method used by Dr. Eisenberg is today used very actively in child psychiatry in several crucial ways. The atypical child was studied by Putnum in a setting permitting maximal observation of mother-child interplay. In children's institutions, consultants, doctors and others regularly observe and learn from observing the sick child's direct interplay with adults, especially with the child care personnel. All sorts of crucial child-child relationships are also observed in children's treatment centers. Such observations have become an object of especial interest and emphasis.

There are degrees of knowing—what is guessed, what is supposed, what is inferred, what is known for certain. But nothing is more convincing than what we have actually observed, or believe we have directly observed with our own eyes and ears. In our difficult field, the conviction we have about our knowledge and, therefore, the use we make of our knowledge makes a great deal of difference—whether we just guess this to be a fact, suppose it to be so, or feel we know for certain it is so. What is also to the point, what we have just seen *going on*, may lend itself much more to therapeutic discussion and effort with the patient than, say, something the patient has done a year ago and has not had on his mind since. One of the reasons for the great emphasis of Redl and others on the life-space interview is that the very sick, acting-out child may be ready to forget for a long time what has happened and what he has done, unless a person, skilled in discussion and the timing, is available for such talks shortly after the child has acted in a certain way. Thus, the most important marginal therapy and handling of certain aspects of an institutional child's productions and acts would never become accessible to change if it were not for our appreciation of the value of direct observations and the use of such observations immediately after, in a therapeutic relationship.

Special commendation is due Dr. Eisenberg for the further contribution to our knowledge of school phobia as achieved by this method in his work and therapy. Students in our field can be taught volumes about most basic situations by actually seeing or observing these crucial situations involving parent-child interplay. Also, I know of no better teaching for a young psychiatrist than a therapy case of a school phobia, especially in collaboration with another therapist treating the mother. Of course, good supervision is also necessary for the young psychiatrist because (in addition to the problems of dynamics with which he needs help) the tremendous ambivalences in the parents-child relationship (in the severe cases of school phobia) must not only be observed to be understood, but also seen in their proper perspective to be dealt with therapeutically.

AN ANALYSIS OF THERAPEUTIC ARTFULNESS¹

WALTER BROMBERG, M.D.²

Therapy is the chief justification of the science of psychiatry. Artfulness is one of the main ingredients in the practice of psychotherapy. This paper proposes to clarify some psychologically significant aspects of artfulness in psychotherapy.

Art is a complex human activity involving an even more complex group of physical skills, attitudes, and modes of symbolic expression. *Artfulness*, on the contrary, has two distinct meanings: one indicating a performance utilizing more than ordinary skill, or more accurately, the application of a technique with attainment of results that exceed those expected from the application itself. The second denotes a skillful or cunning manner of gaining an end. In general, artful endeavor encompasses more than skill of performance: it includes the human functions called talent, aesthetic preference, experience, and knowledge. There is a further difference between art and artfulness in that the latter relates to persons on whom artfulness is wrought, whereas art relates more particularly to inanimate objects worked upon. So the overtones of artfulness, in its second meaning, of involving a wily, indirect, or ingenuous manner of utilizing skill, invade the first meaning.

The distinction can be clearly shown by stating that the artist, the craftsman, and musician display artistry: the physician, the salesman, the lover, and the lawyer pleading at the bar, display artfulness. The application of a technique, as in painting, wood-working, or music, represents art; whereas, artfulness in the application of a technique involves a human relation, as in the practice of medicine, merchandising, love, or law. The first meaning of artfulness is the one with which this paper will deal, since it relates to the technique and method of medical psychotherapy. Nevertheless, the human nature of psychotherapy introduces the possi-

bility of influence of that secondary meaning stated above.

Psychotherapy: Art or Science?—The stimulus for this inquiry arose from the wish to analyze those factors in psychotherapy which make it successful, when it is so. It is undeniable that all techniques employed in modern psychotherapy by any school or group, meet with successes as well as failures. An explanation given by any one protagonist cannot explain, in his own terms the process of psychotherapy in the hands of others. We search then for a common factor in effective modifications of symptoms. The study of artfulness may provide a clue to this factor.

Without laboring the point of definition, we can agree that psychotherapy utilizes psychological means for the disappearance or amelioration of mental or physical symptoms in patients, not attributable solely to chemical or mechanical energies or reactions. Included, therefore, are innumerable methods, some naïve, some sophisticated, some psychologically informed and some religiously or philosophically derived. In "scientific" and unscientific psychotherapy alike, one finds a mixed picture of accomplishment and failure, conceptual order and chaos, prediction and dependence on chance, rational theories and intuitive guesses.

Even among trained psychotherapists, the results of prolonged psychotherapy by various workers using differing therapeutic approaches in analytic and non-analytic fields, were found to be strikingly similar. Appel (1) and his associates (1951) who summarized comparative reports of success and failure of various procedures, offered the possibilities that either 1. psychotherapy has no effect on the patient, or 2. the non-specific and common elements of the different types of treatment outweigh the individual differences. On the basis of the second hypothesis the authors detail the common denominators in psychotherapy, considering factors inherent both in the patient and therapist which make for success. The essential point, Appel suggests, is the affective relationship between

¹ Read at the 113th annual meeting of The American Psychiatric Association, Chicago, Ill., May 13-17, 1957.

² Address: 2720 Capitol Ave., Sacramento 16, Calif.

patient and therapist. This relationship is recognizable as essentially emotional in nature, being compounded of conscious, and unconscious (transference and countertransference) elements.

The meaning of this relationship is the subject of our inquiry. However, we shall accept the emotional aspects of this relation without argument and directly consider the operational complex of the therapist—the attitudes, convictions, and beliefs within the therapist. These are conveyed and imbedded in the *application* of technical methods and hence can be subsumed under the “art” of psychotherapy.

It will be generally agreed that modern “dynamic” therapy, both individual and group, claims kinship to the scientific method. It also admits, perhaps less proudly, its relationship to the “art” of medicine. However, the relative place of science and art in psychotherapy has not been precisely defined in psychiatric literature. For one thing, the practical urgencies of the therapist’s task restrain him from too close an analysis of forces involved in application of his techniques. Nevertheless, every therapist, no matter of which diverse school or movement, is aware of the methodological defects of psychotherapy as science. Inasmuch as scientific method relies on quantification, psychotherapy must necessarily be distant from science. If predictability is to be an unailing result of application of scientific laws, psychotherapy is not truly scientific. If sound postulates on which to erect hypotheses are requisite, (e.g., that a given psychologic trauma acts as a “cause” for development of mental symptoms and that removal or nullification of the trauma would remove the symptom), psychiatry and psychotherapy are clearly assailable as scientific disciplines.

Recognition of these difficulties in placing psychotherapy within the limits of the scientific universe of discourse is customarily met with the admission that therapy is more art than science. It is true that intuition and empathic sensitivity within the therapist are acknowledged. But further penetration is needed into the feelings and attitudes involved in the “art” of therapy which come to occupy a vital position in the therapeutic relationship.

The most striking point in exploring the

application of elements which we call art, is the universal recognition that art involves symbolic forms. Philosophers distinguish between *discursive* and *symbolic* forms of thought, the former being inductive reasoning as employed in scientific explanations, and the latter recognized as emotive, non-articulated expressions of feelings. In this sense art appeals to human perceptions with greater immediacy than do the presentations of discursive thought.

This modality of human expression, i.e., symbolic forms (or color) in art, clearly carries an implication of conceptual primitiveness. This primitive quality is accompanied by its presumptive force in influencing human behavior. This universal implication carries a further derivative implication, namely, that artful addition of symbolism in the application of scientific hypotheses, will increase the therapeutic effect. Were it not for this unspoken, partly ‘magical’ hope or wish, there would be only the minutest fraction of therapeutic activity evident, compared with what has been witnessed among professional and lay workers in all medical fields for centuries. The final implication of the original premise is that artfulness in healing, whether developed upon empirically based techniques or methods, or blandly superimposed on capricious techniques or methods, will succeed where application of unadorned scientific hypotheses fail. Herein lies the basic predicate underlying the value of the “art of medicine.”

Psychological Basis of Artfulness.—The attitude, that symbolism in human relations carries greater strength than applications of reason based on scientific principles, is imbedded in the tradition of medicine, as in law, pedagogy, and other areas involving personal relationships. In medicine it is seen in the *lege artis* (rules of the art); those diverse aides to the traditional doctor-patient relationship, the physician’s style in handling patients, his “bed-side” manner, the air with which he utilizes his instruments and equipment, his framed diplomas and licenses, the semihushed waiting room atmosphere—in a word all the embodiments of his “role” as healer. These stylized conventions, absorbed in the physicians’ training, are intimately tied to the authority of medical knowledge. The psychologic importance of such

ditional artifices is that they presume to increase effectiveness of therapeutic measures. This implication is an unspoken accompaniment of the doctor's presence with a patient.

From which level of psychic activity do these implications proceed and what are the psychologic forces that uphold them?

We may indicate the symbolic factors in a therapeutic relation as follows: 1. The influence of magical thinking, a vestigial psychological element to which no human being is immune, is immediately encountered. 2. Secondly, artfulness is implied in the premises of a healing technique; namely, that a treatment method, e.g. hypnosis, requires artful application. 3. Third, is the action of unconscious omnipotence fantasies or neurotic defenses against fear of failure on the part of the therapist. 4. A fourth entails the therapist's pride or personal satisfaction which is related to the narcissistic gratification of the healer. 5. A fifth factor is the exclusiveness, as seen in the members of a guild or craft, which is related to self-esteem arising from social group identifications. 6. A final psychological consideration is the persistence within all individuals of pre-verbal symbolic patterns which replace, to some degree, articulate communication.

These levels of psychic activity, each with its corresponding psychological substratum, form the elements of artfulness. They are all active to some degree. The entities just enumerated can be listed in order of their degree of intensity as they emerge in artfulness. 1. Magical thinking is a small factor among trained psychotherapists because these workers are aware of magical elements which are under constant pressure of suppression. The concept of maturity itself is based on the accomplishment of such control on the part of the intact ego. 2. The implication of artfulness in the premises of a technique is a frequent factor because some treatment methods, e.g., electric or insulin shock, involve chiefly mechanical or chemical equipment. 3. Defenses against unconscious fears within the therapist may be a partial factor, especially in the expression of an omnipotence fantasy (to which the enlightened psychotherapist is alerted through self-analysis and self-perception). 4 and 5. Pride in a professional group through absorption of self-

esteem is an undeniable factor in all medical and psychologic therapy. 6. The tendency toward pre-verbal symbolic expressions and its facilitation of communication is a factor in therapeutic work as it is in all human activities(2).

Added to these psychological influences which uphold the implications described as underlying artfulness in therapy, is one overwhelmingly significant factor—the participation of a deep-rooted service motive. The surface expression of the impulse to help others is readily recognized as "social idealism" in individual or community situations: its psychologic component is the pervasive striving or "conative" drive. The function of striving or conation in the therapist calls up all the partial psychological forces just enumerated. "Service" is an ethical concept, "object interest" is a psychological element, and "conation," if it can be further refined in description, a striving inherent in the human ego.

The place of conation in the therapeutic transaction has not been explicitly recognized. One of its elements, the service motive which reflects both a psychological and reality value, has been somewhat whimsically alluded to by Masserman(3) as one of the "delusions" or "Ur-defenses" of mankind. The delusion of "man's kindness to man," is related by Masserman as one of the basic postulates, or psychologic defenses, by which we live, "man's Ur-defenses." Yet this concept of human interactionism, the "delusion" of striving to help each other, is what keeps humanity from flying apart through centrifugal force. The conative impulse behind it is here presented as a vital aspect of the therapeutic process.

Conation and Scientific Judgment.—The contention here presented states that conative drives are active in every therapist, forming a vital part of his underlying operational attitudes. Parenthetically, it may be further stated, that these drives are held in common by all socially sensitive persons. Such a drive is implicitly accepted by physicians in the larger perception of their calling. Traditional attitudes within the healing craft, including universal symbolic forms mediating the service attitude and conative drives, are intimately related to artfulness. It would not be correct to identify this complex as counter-

transference because it does not depend solely upon infantile elements but upon the total adult personality configuration of the therapist and his participation in a social conserve.

It might be considered obvious that a healer is imbued with a wish to heal and that this emphasis on conation could be easily dismissed as trivial. But were this done, a significant relation would be overlooked—the specific relation between scientific hypotheses and artfulness, *e.g.*, as in dynamic psychotherapy. In turning to this relation, it must be pointed out initially that the application of a technique of psychotherapy is always based on an implicit or explicit, completely or incompletely formulated theoretical foundation. The assumption inherent in all psychotherapy can be simply stated—that the technique, developed from the theory if correctly applied, will bring the expected result. Thus hypnosis, correctly applied, will cure hysterical conditions; persuasive or suggestive therapy, adequately applied and carried through, will result in benefit to psychosomatic patients; electro-convulsive therapy, when applied in a technically approved manner to depressions, will result in marked improvement in those patients; similarly psychodynamic therapy and psychoanalysis in neurotic conditions, transference neurosis, and the like. In this accounting no explicit place has been made for the effect of the complex described above, *i.e.*, the extra-technical elements within the therapist.

Why is this *operational* complex within the psyche of the therapist not regularly given greater credence in analyzing the therapeutic process? To understand this hiatus requires an analysis of the mental work involved in arriving at an efficacy-judgment of a given hypothesis and its implied technology. At the time a therapeutic procedure based on newly enunciated scientific principles is initiated, its efficacy is expected to derive solely from the scientific principles invoked. As time proceeds, a retrospective scrutiny indicates that elements other than those based on the original hypothesis in this given therapeutic maneuver, may have been equally responsible for therapeutic success. These can be accounted for by modifying the hypothesis and technology, or can be neglected as the result of chance or artful elements, usually the lat-

ter. The investigator, in a critical evaluation of success in his early efforts, only slowly becomes aware of the concomitant presence within him of artful elements of therapy. He would prefer to regard the result in terms of correct, or (if need be) amended theory. The psychological scientist, like all scientists, has a preference for "scientific explanations" and theoretical exactitude. Nevertheless, we cannot escape recognizing, within the worker, a psychological defensiveness regarding the "science" of a scientific procedure. It is this *usually* praiseworthy attitude that does not allow appreciation of underlying conative drives and attitudes.

If it were possible to view a current scientific procedure with critical hindsight, we might thus see more clearly the operation of the defensive sense of sureness within the investigator or therapist. At the time any new scientific procedure is applied in medicine, the feeling of surety is contained within and obscured by the investigator's artfulness. The defense weakens when one looks back a year, a decade or a generation later at the "science" of the moment of which we are speaking. This is so universal a succession of events as to be almost axiomatic: the science of today becomes the mythology of tomorrow.

A reading of medical history demonstrates that all "scientifically" based therapeutic procedures become less successful as they are tested in the crucible of time, while they simultaneously appear to be *theoretically* less valid. The disparity between the original and the later impression of validity does not only depend on the lack of actual empirical scientific verification. It also depends upon the fact that the original veracity of the scientific theory invoked was misjudged by virtue of these unseen or unconscious attitudes already discussed. The complex of conative impulses, etc. which has been identified with artfulness is clearly a factor in this misjudgment. The sense of sureness with which the operational complex is associated is resident within the mind of the investigator and hence not a function of the scientific hypothesis itself. Part of this sense of surety arises from the investigator's participation in the authority of accumulated medical science and part arises from the therapist's denial of operational conative elements within himself, which are projected to the scientific founda-

tion of his original hypothesis. This latter defense takes the form of concentrating on "science" and on the theoretical constructions involved.

One source of difficulty arises from the customary attitude of physicians toward a scientific hypothesis. A psychologic theory, *e.g.*, causation of a symptom, is merely a postulate system, acting as a "hypothetico-deductive" system(4), until observations confirm or deny its validity. Psychologic laws or accredited hypotheses have no fixed life of their own, so to speak, depending on everlasting verification. But scientific laws do have an emotive value for those who predicate them in a given technique: they provide a feeling of assurance. As Feigl(4) further states: "All fruitful hypotheses are not merely summaries of phenomena observed, but also inductive anticipations of other phenomena yet to be discovered."

We are faced then with a conflict between logical validity of a hypothesis that initially seems to work in practice and the emotive value, in this case the sense of assurance conferred by it. The crux of the problem is that empirical observations which clothe an hypothetico-deductive system are often taken as denoting logical validity when in fact they do not yet provide final verification in the formal sense of logic. In estimating feelings of psychological sureness evoked, we must distinguish carefully between amassing verifying observations and assigning logical validity since we are apt to invest the same emotional value in corroborative material as we do in logical deductions. Especially is this so in the early life of a therapeutic method wherein scientific hypotheses play a large directing role.

Nowhere can this delicate balance of verification in hypotheses and the sense of surety be more clearly observed than in present-day dynamic psychotherapy. To repeat in a highly diagrammatic way the current psychoanalytic hypothesis, modern dynamic psychotherapeutic principles state that a symptom represents a distorted or direct expression of defense by the ego against unconscious impulses and wishes. The chief therapeutic task pursued in dynamic psychotherapy entails an investigation through the maze of denials, rationalizations, and defenses of the conscious personality, for the repressed instinctual impulses

which are represented in the unconscious of the patient and emerge, in derivative form, in symptoms. The goal of dynamic therapy is the exposure, through the transference, of these unconscious elements to "that portion of the ego which was amenable to reason or to logic."

The transference is of itself an essentially emotional situation for the patient and for the therapist. The technology and technique of psychoanalysis take into account both the emotional and cognitive aspects of the process. Our interest is in tracing the relation between the operational complex in the therapist and the cognitive aspect of the therapist's work, assuming that counter-transference elements have been successfully understood.

Artfulness and Comprehension.—Let us pursue the crucial process of comprehension within the therapist's psyche, as entailed in both the operational complex and cognition. Reik, one of the few analysts who have paid close heed to this process, has discussed the way in which the therapist apprehends relations between unconscious derivatives and symptomatic appearances within his patient. It is generally understood, Reik points out, that the analyst utilizes historical facts which are given and derived from associations, dreams, etc., to which he adds this intuition and his own perception of unconscious processes in developing a conviction about the course of events. Reik(5) quotes Freud's statement in this connection:

Nothing remains (for the analyst) but to maintain his conviction, based upon his experience, with all his might, after listening to the voice of his own self-criticism very carefully and to that of his opponents with fair attention.

This process of comprehension represents the acceptance of interpretations by the therapist prior to his relating them to the patient for the latter's acceptance. This is made up of part acceptances on a trial and success basis, of testing hypotheses in view of the actual historical factors, of sending up trial balloons to estimate reactions. In Reik's words, it comes to be a process evolved from familiarity with a given case, of "groping presentiment . . . (which travels) . . . almost to that of a clear, scientific, definite cognition of the hidden impulses of the soul."

Bringing the unconscious conflict into the "range of reason," is the underlying activity

within the analyst which makes for his conviction. Herein one may see the influence of the operational complex of all the drives entailed in artfulness as described above. This conviction of a causal chain of events, once it has become a "scientific, definite cognition," is presented to the patient for his perception with added demonstrations in the 'working-through' process. Demonstrated 'proofs' to the patient and analyst plus the implications of the significant relationship between unconscious drives and conscious symptoms, amounts to a belief. Inextricably mixed with this belief is the sense of sureness described. There are, of course, incorrect interpretations, but once a set of conclusions is established, the conative drive for success advances them to a level within the therapist (and in the patient?) where therapeutic action is more likely to occur. The therapeutic function of the series of beliefs set in action by the therapist's comprehension and conviction is aided by the force of the conative complex communicated to the patient in the technique and art of therapy.

Interpretation and Belief.—The causal relationship between unconscious conflicts and defense formations (symptoms) developed through the patient's history is presented through interpretations to the patient piecemeal, and repeatedly in manifold ways. The sequence of events, i.e. the formulation of cause in terms of the patient's emotional history, and its effect in relieving the symptom, is by no means automatic. For the meaning of the patient's conscious and unconscious historical experiences has to be uncovered, presented for acceptance through interpretations, and believed. In this process of believing, we feel that both the transference influence within the patient and the conative complex within the therapist are involved. For an individual the truth value of an interpretation is relative to his view of his life and experience. The patient can never "know" what was unconscious to him except by inference—no matter how good the grounds for such inference may be. The interpretations are accepted by the patient as a kind of metaphor concerning what has apparently (to the therapist's comprehension) gone on within the former. It is, therefore, necessary to advance an analogous process in the patient to that of the operational complex in

the therapist, and this appears to be the assumption towards the therapist's interpretations of an "as if" postulate. We must conclude that the truth-value of the historical (emotional) factors uncovered in therapy are assigned belief within the patient primarily as an "as if" postulate.

A word must be said regarding the question of truth value of interpretations. The focal point of this paper was an analysis of those factors in the relationship between therapist and patient which are common for all psychotherapeutic methods. In this relationship we have already outlined the place of the operational complex which we identified with artfulness. Therefore, the logical problem of testing analytical interpretations for 'Truth,' or more accurately stated, for empirical verification, is not in question. This problem has been discussed in detail by Wisdom(6), who showed that the testing or verification of an analytical interpretation requires fulfillment by the specific *criterion* of Popper: namely, that a theory is testable if it could be "refutable in principle, which means that we must be able to specify what situation, if the theory were false, would show that it was false. Without this, . . . no amount of supporting evidence provides any real confirmation at all; it is easy to get endless support for even a false theory. But what is needed is the failure of refutation that ought to succeed."

In attaining truth values for an interpretation as it occurs in therapy, we must find a factor in the patient which parallels that factor of conviction within the therapist regarding causality of symptoms. This is another way of discussing the truth value of effective interpretations from the patient's point of view. To understand what happens in successful dynamic psychotherapy or any therapy where the operational complex of the therapist is active, we must consider the patient's perception of the truth value of interpretation in the manner as described above.

Perception, cognition, and assimilation within the patient's ego of unconscious material brought forth in interpretations can be most plausibly explained by the "as if" postulate. This allows assignment of truth value to that which is offered to the patient. The therapist's work builds on the historical re-

construction and reactions of the patient's life, while the patient's acceptance involves the implicit assumption of the "as if" posture. Thus, we can visualize the therapeutic process in dynamic and all other psychotherapies as the joint effect of the therapist's activities (comprehension and conative drives) and acceptance by the patient of the result of these activities.

SUMMARY

The common factor in all psychotherapeutic relations is admittedly the emotional relation between therapist and patient. In scrutinizing this factor, we encountered artfulness, the application of scientific technology which involves certain psychologic overtones of extra-technical nature operating within the therapist. The elements constituting artfulness involve, on one hand, the psychology of the therapist, and on the other, the psychology of the therapeutic process itself. The operational complex, identified with artfulness, resides in the *application* of a skill, *i.e.*, is extra-technical and applies to all healers whatever their original postulates, premises, or theories of psychotherapy. This complex involves essentially conative impulses and insinuates a sense of assurance to the therapist which invades his critical judgment toward the efficacy, the "science," of the theoretical foundation of his method.

Successful therapy is initially recognized as dependent on the technology stemming from the scientific hypotheses advanced. Judgment concerning the scientific hypothesis which underlies every method of psychotherapy lies under the shadow of the operational complex which has been identified with artfulness. Later the efficacy of a treatment method diminishes: that degree of success, not attributable to the specific scientific theory and its technology, is recognized as due to artfulness. The intrusion of the conative influence and other unconscious forces—magical thinking, omnipotence fantasies, narcissistic satisfaction, symbolic expression, etc., bears on a scientific judgment of the method in question, *e.g.*, the verification of interpretations in psychoanalytic treatment. To explain how therapy works at all in successful cases, one must accept the extra-technical elements involved. This is suggested as

the most plausible way to explain successful therapy when conducted by workers who point to the most diverse scientific theories and formulations as a valid basis for their accomplishments.

BIBLIOGRAPHY

1. Appel, K. E., Lhamon, W. T., Myers, M. J., and Harvey, W. A. Long Term Psychotherapy, in Psychiatric Treatment, Assn. for Res. in Nerv. and Men. Dis., Baltimore: Williams and Wilkins Co., 1953.
2. Ruesch, J., and Kees, W. Nonverbal Communication. Berkeley: Univ. of Calif. Press, 1956.
3. Masserman, J. H. The Practice of Dynamic Psychiatry, Philadelphia: W. B. Saunders Co., 1955.
4. Feigl, H., and Sellers, W. Readings in Philosophical Analysis. New York: Appleton-Century-Crofts, Inc.
5. Reik, Theo. Listening With the Third Ear. New York: Farrar, Straus, and Co., 1952.
6. Wisdom, J. O. Brit. J. for the Phil. of Sc., 7: 25, p. 13, May 1956.

DISCUSSION

ROY R. GRINKER, M. D. (Chicago, Ill.).—In the field of psychiatry we are currently in an era in which problems of therapy seem to be the major focus of interest. Since 1939 we have witnessed a tremendous development of somatherapies, including insulin and electric shock, and recently there has been a boom in pharmacotherapy, at least bringing prosperity to the drug houses. In the latter period of this era, yet to reach its height, there has developed a renewed interest in the problems of psychotherapy, not necessarily as a result of the excitement over the somatherapies but probably as an associated process. So great a recent interest has been invested in the subject of psychotherapy that it has been, with some degree of presumptuousness, termed a separate scientific discipline. Large foundations are giving huge sums of money for the investigation of principles of psychotherapy to individuals who are now frantically writing around the country for suggestions as to investigative procedures.

For a long time we have known that, although psychotherapists may disagree about theory, they often utilize identical operations in their treatment. We also know that a wide variety of techniques achieve equally beneficial results. But the combination of theoretical bias and specific operational techniques do not encompass all the possible variables, significant for effectiveness in the total field of therapeutic transactions. We know that within this field there are the variables of patient, therapist, the sum total of verbal and non-verbal transactions occurring between them, the life situation, the goal of the therapy, and the inner and outer changes in the mental life and behavior of the patient.

So complicated is this field with its many unknowns, that once I stated that questions arising about psychotherapy could be formulated as follows: What kind of patient suffering from what kind of disturbance can be benefited to what degree by what kind of therapist using what kind of techniques? Surely these questions, which are not totally inclusive, are enough to make investigators wary of the complexities involved in a scientific understanding of psychotherapy and to consider the aspects of intuition and artfulness as concerned in therapy.

Teachers could dismiss these complexities by advising the student to use the therapy that comes natural, have faith in it, and enjoy it! Students in training realize this and are not content with theoretical pronouncements or general operational directions. They ask specific and often embarrassing questions as to what do you say or not say and how do you say it or how do you not say it. If we emphasize such factors as empathy, intuition, and artfulness by generalities and the finality of authority with, "Either you got it or you haven't," we are guilty of making a natural phenomenon into something magical.

Doctor Bromberg has indicated that, according to his definition, artfulness is the application of techniques involving more than ordinary skill in dealing with emotional relationships between the therapist and the patient. One immediately asks: has he set up artfulness as an antithesis to the scientific approach? Is the "more than ordinary" some un-understandable power held by few and not learnable? I think he correctly says that at the present time psychotherapy is not a scientific discipline, for it is not quantitative, predictive, nor does it give relief by removing "the cause." But, in spite of not being scientific, it often succeeds even though a specific hypothesis fails of verification. Bromberg then categorizes 6 levels of psychic activity contributing to artfulness and, by isolating each of them and subjecting them to scientific scrutiny, he has done what any good scientist would: he isolates each variable as a precursor to its scientific investigation, and most of his paper is oriented toward that end.

Dr. Bromberg is particularly concerned with the striving in the therapist, as he participates in the healing art, toward helping and curing his patient. This corresponds to what R. G. Brown stated in the early 1920's: that the essential factor in therapeutic results by any method was the therapeutic enthusiasm of the psychotherapist. It is interesting that in the field of psychiatry the younger therapists who are not yet thoroughly indoctrinated by specific theoretical concepts, and psychiatric social workers who are more or less open minded and less concerned with theory, get better results with more

difficult patients than do the older experienced therapists.

It is as if the scientifically based therapies go the way of all flesh as various theories become abandoned, but the connotative, striving, and enthusiastic aspects of therapy arise fresh with each new generation. We have seen this in almost pure culture in the field of pharmacotherapy. One can point to the literature of older days and indicate that statements made about the effect of bromides, barbiturates, insulin, electric shock, are identical to what is said today about the tranquilizing drugs. In our own Institute we have shown clearly that the attitude of the psychiatrists definitely influences the therapeutic effects of even the most potent drugs.

I think Dr. Bromberg clearly states that the therapeutic belief firmly arrived at by the therapist becomes transmitted and accepted by the patient. The degree of sureness with which this belief is held facilitates the art of therapy. Some scientific psychoanalysts consider that each interpretation made to a patient is a hypothesis and that the patient and the therapist then "work through" the material to verify or disprove this hypothesis. But, unless the analyst is very alert, interpretations are often "worked through" and accepted according to the cues emanating from the therapist. It seems that human beings need value systems and illusions with which to live and endure the anxieties of life. The neurotic patient's values and illusions have failed him. He will accept the therapist's illusions, for they are presented with vigor and they seem to work, at least publicly. The acceptance of these illusions within the magical setting of the therapeutic situation is profoundly influential in helping the patient at least temporarily.

These magical elements are common to all therapies. Their effects are universal and occur quickly, but I believe that alone, without appropriate content, they are shortlasting, for they are followed by little change within the patient. Nothing permanent is added to him, and little learning occurs. His integrative capacity is not increased, and his tolerance for frustration is not changed. I think that one must view the therapeutic system in a perspective oriented toward change over time. If we are thinking of short-term help for crucial crises in patients' lives, then artfulness based on sincere therapeutic striving is usually successful. If we are thinking of longlasting psychological (and physiological) changes within the patient which are effective in a variety of present and future life situations, we will then have to view the therapeutic process from an additional frame of reference. Certainly Dr. Bromberg is to be commended for having called attention to artfulness as a focus of scientific interest, for it may be the significant factor in some therapies and at least part of the total field of all of them.

TOWARD AN INTEGRATIVE THERAPY OF THE FAMILY¹

NATHAN W. ACKERMAN, M.D.²

Family diagnosis and therapy represent a new venture in mental health. Family therapy makes its entry because there is historical need for it. It comes into being especially through the need to encompass the phenomena of the relations of personality and social role adaptation.

As the knowledge of psychopathology expands, we can discern some of the limitations of individual psychotherapy. The main focus of traditional forms of individual psychotherapy has been on the internal economy of personality. Its techniques have been pointed to specific pathogenic conflicts and the resulting symptoms within the person, but it has not adequately conceptualized the problems of total personality organization and integration of personality into the tasks of group living. To whatever extent individual psychotherapy fails to confront the problems of personality and social role, it fails to be a true adaptational therapy.

My personal conviction as to the potential value of family diagnosis and therapy is strengthened by several relevant considerations:

1. In child psychiatry and child therapy certain problems continue to baffle solution due to our inability up to now to formulate the psychodynamics of the family group, and thereby make possible reliable correlations of child and family behavior.

2. The role of the family in the stabilization of the mental health of the adult person has been largely neglected. Because of this, traditional standards of diagnosis, therapy and prognosis of emotional disturbances in adults remain deficient in certain respects. The interrelations of individual and family contribute to the determinants of mental health at every stage of maturation, infancy, childhood, adolescence, adulthood and old age. Such relations influence the precipitation of illness, its course, the likelihood of recovery and the risk of relapse. Recep-

tivity or resistance to therapy is partly the product of emotional interaction with other family members. Prediction of changes in behavior is accurate only to the extent that family processes are taken into account.

3. Disorders of personality have undergone progressive transformation related to sociocultural change and corresponding shifts in family structure and function. Individual psychotherapy has not caught up with this challenge. The core of the problem is a shift in personality organization, particularly in defense operations, which favors externalization of conflict and "acting out."

4. For several decades, individual psychotherapy has had the center of the stage. The lure of absorption with the intricacies of individual therapeutic technique has been strong. In the meantime, the gap between psychotherapy and clinical diagnosis grew ever greater. The challenge to achieve better diagnosis, to understand more precisely what is wrong with the patient, to work toward the goal of psychological specificity in treatment method, was frequently by-passed. Surely, further progress in psychotherapy is in danger of bogging down unless we turn back once more to sharpen the standards of diagnosis. Therapy cannot be primary; it must always be secondary to the precise assessment of pathology.

5. At still another level, the absorption with individual psychotherapy has diverted attention from the confrontation of our relative failure in the field of prevention. In the long view, if we are to further the cause of mental health, it is self-evident that the goals of treatment, prevention, and education to healthy values in human relations must be drawn into closer alignment.

Health and illness are functions of the interrelation of organism and environment. The family is the basic unit of human experience; it is the primary group into which the functions of personality are integrated. The development of a social psychopathology of everyday family life is a responsibility of the first priority, if we are to meet the mental health challenge of our time. Requi-

¹ Read at the 114th annual meeting of The American Psychiatric Association, Chicago, Ill., May 13-17, 1957.

² Address: 43 E. 78th St., N. Y. 21, N. Y.

site to this goal is an expansion of the dimensions of diagnostic thinking so as to make the unit of evaluation the individual within his family group, rather than the individual assessed in isolation.

Psychiatric illness is a process; it is neither static nor is it ever an exclusively endogenous disorder. The interrelations of individual and family are an integral part of such illness. Historically, psychiatry tended to equate symptoms with illness but symptoms are only a part of illness, not its entirety. So soon as we expand the scope of our diagnostic concern to include total life performance and in particular the integration of personality into family roles, then the psychological life of the family as a whole must be encompassed in a broader conception of illness. In this scheme of things we are called upon to weigh, both in individual and family, the potentials for emotional health against the potentials for psychiatric distortion.

In the psychiatry of children, we are accustomed to evaluate the pathology of the family environment. In the psychiatry of adults, the study of family pathology has been neglected. It is true that the homeostasis of adult personality is relatively greater than that of the child. Nonetheless, the autonomy of the adult is partial and incomplete. We think of the behavior of the child as a kind of mirror of the psychological core of family. As we turn to the adult, however, we shift our view and perceive him as separate, autonomous and exclusively responsible for his life choices. This is a flat-

tering view of the self-sufficiency of the adult person, but it far exceeds the known limits of human adaptation. Effective emotional integration into family roles is necessary for the stabilization of the mental health of the adult.

The goal of family diagnosis and therapy is to join person and environment rather than to dichotomize them. It signifies the assessment of adaptation and mental health, not exclusively in the frame of individual personality, but rather in the wider context of the person's organic involvement in his whole human community. It links person, family, community and culture. This constitutes a broader concept of the issues of mental health, requiring new hypotheses, new methods of research and validation, and different ways of applying the science of psychodynamics to the task of bettering the mental health of the community.

In previous publications (1-13), I have endeavored to develop basic concepts, dynamic principles and behavioral criteria which are relevant to the task of achieving family diagnosis. Foci of pathogenic disturbance are evaluated within the framework of the psychodynamics of the family entity *per se*, conflict between family and community, interpersonal conflict in family pairs, and finally, intrapsychic conflict and symptoms within individual family members.

In a recent paper (4, 12), I suggested a tentative scheme for establishing the lines of correlation between individual and family behavior. I repeat here only the bare outlines of this scheme.

Individual	Family Pair	Family Group
1. Self-image or psychological identity.	Psychological identity of family pair.	Psychological identity of the family group.
2. Integrative capacity or homeostasis of individual personality.	Integrative pattern or homeostasis of family pair.	Integrative pattern or homeostasis of the family group.
3. Pathogenic conflict, anxiety, symptoms or other anxiety manifestations, and the corresponding mechanisms of restitution.	Pathogenic conflict in family pair, its manifestations, and the mechanisms of control and restitution.	Pathogenic conflicts in the family group, interplay of overlapping conflicts, their manifestations, and the mechanisms of control and restitution.
4. Adaptation to family roles, capacity to accommodate to new experience, reality testing, learning and new growth.	Adaptation to patterns of reciprocal role relations, capacity to accommodate to new experience, reality testing, learning and new growth.	Adaptation to the overlapping patterns of family role relations, to group identity, striving, values, and the family's capacity to accommodate to new experience, to reality test, to learn and to achieve new growth.

The rationale for this scheme and definitions of terms are given in the above-mentioned paper.

I should like now to highlight certain common clinical observations which document the need for a social psychopathology of family life and a corresponding program of therapeutic intervention. In a particular family, the first person referred for psychiatric care may be the most sick or the least sick member of the group. Psychiatric patients come from disordered families. If the psychiatrist exerts himself to inspect the relations of the primary patient with other family members, he will be rewarded with some cogent information. The primary patient, whether child or adult, proves often to be an emissary in disguise of an emotionally warped family. A patient may enter therapy on his own to escape the unbearable tensions of an unhappy family; or, he is brought to a psychiatrist by his family. In the latter case, a variety of motivations in other family members may play a part in this first referral. Another member of the family may need to relieve his own guilt; he may seek to control and make over the primary patient's behavior; he may wish to punish the patient; he may use the primary patient as a scapegoat behind which other family members hide their own psychiatric warp. Occasionally, the tendency is to send first to the psychiatrist the weakest and most defenseless member of the family, a child or the more docile of the marital partners.

For example, a man of middle years, severely hypochondriacal, confused and unhappy in his family life refers first for consultation his niece, then his son, then his second wife, using such persons as a kind of scout to test the psychiatrist's benign intentions. After that, reassured against his fear of harm, this man requests psychiatric help for himself. Such an individual proves often to be the center of destructive force in family relations. To a varying extent the initial psychiatric referral reflects the unseen purpose of re-testing a pre-existing emotional balance or power alignment in family relations. Thus, the first person referred to the psychiatrist may be viewed as a symptom of disturbed family homeostasis.

Psychiatric illness as a single or isolated

instance in family life hardly occurs. Almost always other members of the family are also ill. The sick behaviors of these family members are often closely interwoven, and mutually reinforcing. A critical focus of conflict and anxiety may move from one member of the family to another or from one family pair to another. In this sense the family group serves as a carrier of emotional disturbance. Sometimes two members share the same illness or one illness is the complement of the other or they may clash. In the latter instance the continuity of the family may be thrown into jeopardy. It is by no means rare that the core of family life is dominated by these reciprocal patterns of psychiatric disturbance.

The clinical importance of this problem is reflected in still another way. More often than not, the incentive for referral of a patient for psychotherapy is the outbreak of a destructive family conflict rather than the recognition of the existence of specific neurotic symptoms in one family member. Sometimes the existence of neurotic symptoms is not even known until the psychiatrist identifies them as such. Surely there is a relation between psychoneurotic personality and the occurrence of conflict in family relations. But this relation is a circular one. Conflict in family relations precedes the emergence of psychoneurotic symptoms and at a later point in time further conflict in family relations influences the fate of these symptoms or plays a role in the induction of new ones. It is significant clinically that the main spur for psychiatric referral comes frequently from the suffering caused by family conflict rather than from the existence of mental symptoms *per se*. In many families there is no thought of psychiatric referral as long as the neurotic tendencies of the family members are tolerably well compensated within the pattern of reciprocal family role relations. The timing of the demand for professional help tends very much to coincide with acute decompensation of the balance of family relations, bringing in its wake a distressing family conflict. Critical upsets of the homeostasis of a family group thus become a significant mental health challenge.

Moving one step further, we may consider

the same problem from still another standpoint. In the incipient phase of psychiatric illness, the breakdown in adaptation may at first be relatively localized. It may be restricted to the failure to fulfill the requirements of a single family role, as sexual partner, or parent, or household manager. It is only as the psychiatric illness unfolds and the decompensation of defenses against anxiety strikes deeper that the conflict and disordered social behavior spreads to invade progressively all the family roles and the entire range of life activity. We are therefore compelled in each such situation to match the role functions where moderate health is preserved against those other roles where adaptation is disabled by conflict. At certain stages a given individual behaves in a sick way in some parts of his life and maintains a relatively adequate adaptation in others. Performance in some life roles is impaired less than in others. In psychotherapy we make optimal use of this struggle between the more sick and the less sick parts of a person. We mobilize the residually healthy aspects of personality in the battle against the psychiatrically twisted parts. Can we not do likewise in the psychiatric approach to conflict in family relationships and the dynamics of the family as a whole? Can we not weigh the areas of relatively healthy functioning against those other areas which reflect crippling of family functioning?

Due to the fundamental interdependency and reciprocity of behavior in family relations, frequently if one member is treated, others must be treated too. If a disturbed child is treated, so must the mother be. If the mother is treated, the father needs attention, too.

This concern with the maintenance of a certain desired emotional balance in family relations is nowhere so convincingly reflected as in the family lives of psychoanalysts themselves. Male analysts have their wives psychoanalyzed and vice versa. Often, their children undergo analysis, too. In a certain sense, this trend reflects a need for a kind of vaccination procedure, a quest for immunity against the toxic effects of neurosis, so that the unity of the family group may be preserved. Opinions differ as to the efficacy of this prophylactic measure but the

underlying intent is nevertheless clear. In a particular instance an analyst's wife, unanalyzed herself, felt isolated from the main stream of her husband's busy life and blurted out: "What we analysts' wives need is to form a union."

In marital disorders, if one partner enters therapy, sooner or later the other demands help, too. Not infrequently a marital partner, though untreated, becomes deeply involved in the therapeutic experience of the treated one, sharing vicariously his emotional experience. Sometimes they engage in a kind of spontaneous therapy of one another. This may be judged good or bad by different psychiatrists, but the fact is that it occurs.

This is well illustrated in a remark of one patient who told me that she was getting two analyses for the price of one. She thanked me for the remarkable improvement in her husband's behavior while she was undergoing analysis. If one closely observes such marital pairs, one often finds that the therapist is a silent presence in the intimate exchanges between husband and wife as they face problems, share joys, and even as they engage in sexual relations. Thus, the therapist influences family life not only during the therapeutic session, but also from afar, as a living presence in the emotional life of the patient and in his relations with other family members.

From one angle, psychotherapy provides a tool for the restoration of an old balance in family relations following an upset or for bringing about a new and more desirable equilibrium. This is why the psychotherapy of an individual needs to be viewed within the frame of the total life of his family.

These are but a few relevant, empirical observations which affirm the importance of approaching issues of mental illness and health in the wider context of the individual joined to his family group, in addition to viewing the individual patient as a separate person. It is axiomatic that an integrated therapeutic approach to the family entity, if it is to aspire to psychological specificity, must rest on the foundation of comprehensive diagnosis of the family.

Family therapy implies solution of the question: what to treat, whom to treat, when to treat. It requires a formulation of intra-

psychic conflict within the broader frame of salient patterns of family conflict, a correlation of disturbed homeostasis of individual personality with disturbed homeostasis of the family group. It also requires that the corrective approach to pathogenic foci be made within the context of an explicit judgment regarding a set of appropriate goals and values for a healthy family in our society.

Elsewhere(2) I have suggested that a therapeutic approach to the emotional disturbances of family life might be conceived in the following steps:

1. A psychosocial evaluation of the family as a whole.
2. The application of appropriate levels of social support and educational guidance.
3. A psychotherapeutic approach to conflicted family relationships.
4. Individual psychotherapy for selected family members oriented initially to the specific dynamic relations of personality and family role, and to the balance between intrapsychic conflict and family conflict.

Within this frame, individual psychotherapy is auxiliary to and dependent upon an integrated therapeutic program for the family as a social unit. Crucial to such a program is the consideration of appropriate levels of entry, and timing of such entry to affect in sequential stages specific components of the family disturbance. As an aid in the determination of such judgments, home visits by a trained person and careful recording of observations of family interaction in its natural setting are of the first importance. A check of insights gained in clinical office evaluations against intimate observations of family members made on a home visit reveals the special value of such aids to comprehensive family diagnosis. Interpretation of the relevant data according to a scheme already outlined in previous papers(14, 15, 16) is of material help in reaching judgments as to the need and suitable timing of intervention with social therapy, educational guidance, psychiatric first aid, psychotherapy for conflicted family pairs and individual psychotherapy for selected family members.

In acutely disturbed families, where loss of emotional control brings mounting signs of disorganized behavior, the assignment of

a trained person to live temporarily with the family succeeds in restoring emotional balance in family relations. This has a preventive as well as therapeutic value. Occasionally, the use of such a device for first aid achieves a seemingly miraculous effect in calming a chaotic and violent family atmosphere, and thus reducing substantially the destructive effects on individual integration. This is especially pertinent to the protection of vulnerable children.

In further steps, family diagnosis and therapy moves ahead through a series of planned office interviews. Such interviews involve separate sessions with the primary patient interspersed with joint interviews of the patient with other family members. Since the primary patient is viewed both as an individual in distress and as a symptomatic expression of family pathology, the disturbance of this patient becomes the fulcrum or entering wedge for the appropriate levels of intervention into the disorder of the family relations. The sequence of office interviews is arranged with a view to further elucidation of the interrelations of the primary patient's affliction with the psychopathology of the family, and the corresponding interplay between his intrapsychic conflict and family conflict. The aim is to define the conflicts in which the patient is locked with other family members, to assay the disturbances in the bond of individual and family identity, and the interdependence of homeostasis of individual personality with the homeostatic balance of the role relations in family pairs and the family as a whole. It is possible, then, to mark out the patterns of family interaction which are potentially available for solution of conflict or for restitution.

It is important to appraise the extent to which family conflict is controlled, compensated or decompensated; how far family conflict induces progressive damage to salient relationships, impairs complementarity in role relations, and therefore predisposes to breakdown of individual adaptation. In this connection, complementarity in reciprocal family role relations is of special importance insofar as it assures mutual satisfaction of need, support for a needed self image and crucial forms of defense against anxiety.

Impairment of complementarity undermines the stability of emotional integration into family. It aggravates the internal stress of the primary patient, weakens his control of intrapsychic conflict, and intensifies his psychiatric disablement. Some forms of family conflict are temporary and benign; they may deepen and enrich family ties and spur further maturation of family members. Other forms which are prolonged, severe, inadequately neutralized, move toward alienation in family relations and progressive damage to individual adaptation. The support of constructive forms of complementarity in family role relations is of central importance, therefore, in family therapy.

The crucial question is this: can family integration be preserved despite conflict, or does conflict tend to destroy the link of individual and family identity and thus magnify the malignancy of individual pathology? Within the frame of family conflict, what are the vicissitudes of the individual's opportunities to resolve or at least mitigate the destructive effects of intrapsychic conflict? What chance is there to discover a new and improved level of family role complementarity and with this, a better level of individual adaptation?

In the final analysis, this is an issue of interdependence between the individual's defenses against anxiety and the patterns of control and stabilization operating in family relations.

The appropriate cues to the sequential involvement of other family members are derived from the above described orientation to the dynamic relations of internal and external conflict. Of necessity, the proper sequence of such interviews varies from case to case, family to family.

In the case of a child patient the interviews may, for example, take the following order: an interview with the child and mother together, an interview with the child alone, an interview with child and father and finally, an interview with the two parents without the child. Or it might entail at an appropriate point an interview of the child, and both parents, or the child and sibling together with one or both parents.

In the case of an adult patient this might entail a sequence of interviews in which

one begins with the primary patient and after that, a joint interview of this patient with the marital partner and possibly after that an interview of the primary patient with his or her parent and/or sibling, depending upon the cues which derive from a continuing process of family diagnosis. An unfolding of exploratory therapeutic interviews of this kind has the desirable effect not only of mobilizing receptivity to therapeutic influence in the primary patient; it also promotes in family relationships a more favorable climate for the progress of therapy. It makes clear, too, the patterns of benign and malignant psychiatric distortion in the various individual members of the family and allows the psychiatrist an opportunity to draw discriminating judgments about the timing of involvement of other family members in a therapeutic undertaking. At certain stages it may be appropriate to work concentratedly with mother and child together, husband and wife together, or even mother, father and child together. In this setting, one is able to deal directly with certain distortions of perception of family members of one another. Working at this level through a process of reality testing, mediated by the participation of the therapist, one is able to dissolve away various irrational projections of one family member upon another. If at a certain stage certain malignant interpersonal conflicts among family members are ameliorated, it becomes possible to resume systematic individual therapy of one family member with the expectation of an attitude of receptivity to therapeutic influence and with a reduction of resistance. Again one may find at a still later stage that tension and conflict in family relations agitate the primary patient to a state of resistance and again one may choose to deal with this resistance through a therapeutic interview of this patient with the involved family pair.

Thus a pattern of procedure evolves which is a kind of flexible combination of individual and group psychotherapy involving salient family pairs, occasionally threesomes, in which there is distortion of reciprocal family role relations and damaging conflict. The planning of sessions with individuals, and sessions with two or more family members must be discriminatingly timed in ac-

accordance with indications which derive from the active and flexible application of the principles of family diagnosis. From one stage of therapy to the next, as the balance of reciprocity in family role relations shifts, and the focus of pathogenic disturbance moves from one part of the family to another, the therapist must be ready to institute corresponding shifts of the level of therapeutic intervention.

Family therapy is complex. It deals with multiple levels of conflict. It may require a division of labor, in which various phases of the therapy are carried out by members of a clinical team. But these therapists do not function in isolation with individual family members. To the contrary, periodically they meet together with the entire family group to deal with certain layers of shared conflict.

I have described here a tentative approach to illness as a function of family as well as a manifestation of individual behavior. This is only a bare beginning in a complicated but important clinical task.

BIBLIOGRAPHY

Articles by the author may be found in the following publications:

1. *Am. J. Orthopsychiat.*, 20:4, October 1950.
2. *Psychiatry*, 17:4, Nov. 1954.
3. *Social Casework*, 35: p. 139, April 1954, and Feb. 1955.
4. *Psychopathology of Childhood*, New York: Grune & Stratton, 1955.
5. *Changing Conceptions of Psychoanalytic Medicine*. New York: Grune & Stratton, 1956.
6. *Am. J. Orthopsychiat.*, 26:2, April 1956.
7. (With Marjorie L. Behrens, M. A.), *Am. J. Orthopsychiat.*, 26:1, January 1956.
8. (With Marjorie L. Behrens, M. A.), *Social Casework*, January 1956.
9. *Am. J. Psychoanal.*, April 1957.
10. *Internat. J. Sociometry*, January 1957.
11. *Am. J. Orthopsych.*, 26:2, April 1956.
12. *Role of the Family in Diagnostic Process*, "American Orthopsychiatric Association, 1957, March—Paper.
13. "An Orientation to Psychiatric Research on the Family," *Marr. and Fam. Living*, 19:1, Feb. 1957.

HYSTERIA, THE HYSTERICAL PERSONALITY AND "HYSTERICAL" CONVERSION¹

PAUL CHODOFF, M.D., AND HENRY LYONS, M.D.²

"Hysteria," a word whose origins go back to the hazy antiquity of medicine and psychiatry, has passed through many vicissitudes of meaning during its long career. In the course of time the term has successively acquired a number of meanings, some of which, although partially or wholly discredited, have tended to cling to it. As a result of this process of semantic encrustation, and also because it has been used to describe quite different and poorly delimited varieties of behavior, "hysteria" has taken on some of the attributes of both a fossil and a chameleon, so that it is understandable that there is often a total failure of agreement as to just what is meant when something is referred to as "hysteria" or hysterical. This confusion applies equally to the derivatives, conversion hysteria, conversion reaction, and hysterical character or personality, a fact which has been noted repeatedly in the psychiatric literature (1, 2, 3, 4). It will be the primary purpose of this paper to attempt to clarify this situation and to provide some basis for consensus when these diagnoses are used.

Another issue, about which there has been a good deal of question, has been the relative frequency of "hysteria" in men and in women. We believe that this is partly a semantic problem, the resolution of which will be aided by defining more clearly the terms involved and by an understanding of their historical development. Possible reasons for the observed differences in the occurrence of hysterical phenomena in the sexes will be discussed.

It appears that "hysteria" is currently used in at least 5 senses: 1. a pattern of behavior habitually exhibited by certain individuals who are said to be hysterical personalities or

hysterical characters; 2. a particular kind of psychosomatic symptomatology called conversion hysteria or conversion reaction; 3. a psychoneurotic disorder characterized by phobias and/or certain anxiety manifestations—called anxiety hysteria; 4. a particular psychopathological pattern; 5. a term of approbrium.

In this paper, although we are concerned primarily with the first two meanings, the latter three deserve some comment. The term anxiety hysteria was introduced by Freud to describe a type of psychoneurotic disorder in which repression, the principal defense, is supported by the mechanism of displacement. There is no doubt of the cogency of Freud's views of the underlying psychopathology of the syndrome which manifests itself principally in the form of phobias. However, we cannot be certain that every clinical case of a phobia has these mechanisms as its basis, nor that in every instance repression and displacement will cause the appearance of phobic anxiety. We feel that in the present state of psychiatric knowledge psychopathological patterns are not sufficiently reliable and invariable to be used as the only criteria for diagnoses, and that on the whole, imperfect and overlapping as they may be, symptom complexes should be the bases for diagnosis. Not only for this reason but because it avoids another confusing use of "hysteria," we agree with the *Diagnostic and Statistical Manual* which uses the diagnosis "phobic state" rather than "anxiety hysteria."

"Hysteria" in a more general sense is sometimes used as a diagnostic label in an individual with a particular psychosexual history and psychopathological pattern. When this is done without sufficient regard for the symptom picture exhibited, the objections noted in the preceding paragraph will apply.

"Hysteria" used in a name calling sense is a phenomenon which is not uncommon especially in a hospital setting and more often among physicians untrained in psychiatry than among psychiatrists, although we ven-

¹ Read at the 113th annual meeting of The American Psychiatric Association, Chicago, Ill., May 13-17, 1957.

² From the VA Hospital, Washington, D. C., the department of neurology, George Washington University Medical School, and the department of psychiatry, Georgetown University Medical School, Washington, D. C.

ture to suggest it has been known to occur in some of the less official conversations of psychoanalysts. Here the motivation is largely unconscious, a reaction to the frustrating and hostility-provoking behavior of certain patients. This usage of the term has spread to non-medical circles, as when someone whose behavior is exasperating is scornfully called an "hysterical female." Incidentally, the possible significance of the fact that it is almost invariably a woman to whom the epithet is applied will be the subject of later comment. It has been pointed out by one of the authors in another communication (5) that the infrequency with which malingering is diagnosed may be explained as a reaction formation to the hostility engendered in doctors by certain patients with non-organic disorders who are almost invariably called hysterical no matter how transparently conscious the deceptive behavior may be. In general we feel that there is no need to labor the point that the production of frustration and hostility in the observer is not a reliable criterion on which to base a diagnosis.

"Hysteria," used to designate the hysterical personality or character, refers to a well known entity which, however, is more often talked about than defined or delimited. To our knowledge, since the two best known descriptions, that of Wilhelm Reich (6) and that of Wittels (7), there has been no contribution to the literature dealing specifically with the diagnostic criteria by which the hysterical personality can be recognized. In general, psychiatrists, particularly those interested principally in psychotherapy, seem to understand what their colleagues are talking about when they refer to it, but the limiting criteria by which the condition can be recognized are not clear. An illustration is the fact that the members of the committee in charge of revising the psychiatric section of the *Diagnostic and Statistical Manual* to its current accepted form were unable to agree in a description of the hysterical personality and thus no such diagnostic label appears in the manual although the compulsive character is described and included (8). As Marmer (9) has pointed out, it seems that the compulsive character is more sharply defined than the hysterical.

In attempting to delimitate the hysterical

personality we decided to confine ourselves to observable behavior rather than to rely on psychopathological patterns alleged to underly the condition, for the reason mentioned previously. The fact that these patterns are constantly being revised is illustrated by a recent paper (9) which emphasizes the importance of oral elements in the previously accepted, predominantly phallic-Oedipal hysterical neurosis. It was felt that the most effective way to arrive at an acceptable description of the distinctive behavioral characteristics of the hysterical personality would be to consult a representative group of publications referring to the subject and to abstract the elements agreed upon by most or all of the authors involved. The authorities consulted included older and more recent papers, a psychiatric dictionary, and a number of monographs and textbooks (3, 6-7, 9-17). In studying these contributions we found that certain behavioral characteristics were mentioned repeatedly in terms which are either identical or synonymous with each other. These characteristics, in the words or phrases used by the authors referred to, are as follows:

1. Egoism, vanity, egocentric, self-centered, self-indulgent.
2. Exhibitionism, dramatization, lying, exaggeration, play acting, histrionic behavior, mendacity, pseudologia phantastica, dramatic self-display, center of attention, simulation.
3. Unbridled display of affects, labile affectivity, irrational emotional outbursts, emotional capriciousness, deficient in emotional control, profusion of affects, emotions volatile and labile, excitability, inconsistency of reactions.
4. Emotional shallowness, affects fraudulent and shallow go through the motions of feeling.
5. Lasciviousness, sexualization of all non-sexual relations, obvious sexual behavior, coquetry, provocative.
6. Sexual frigidity, intense fear of sexuality, failure of sex impulse to develop towards natural goal, sexually immature, sexual apprehensiveness.

At this point, we found a disagreement between the older and the more recent writers, the former emphasizing the quality of sug-

gestibility, while the latter paid less attention to this characteristic and were more inclined to note the demanding, dependent quality of these patients, which reveals itself particularly in the sticky transference relationships they develop in psychotherapy. Because this latter attribute was closer to our own experience and because abnormal suggestibility was probably more important in the 19th century cultural milieu in which it was emphasized, we decided to make the demanding, dependent quality our 7th criterion for the diagnosis of the hysterical personality.

Although other qualities were named by various of the authors included in the survey, they either were mentioned too infrequently to be used or were so vague and nonspecific as to add nothing meaningful to the total picture. We believe that these 7 behavioral characteristics can be used to provide generally agreed upon criteria on which to base a diagnosis of the hysterical personality. To put the description in more concise terminology than the above it might be said that the hysterical personality is a term applicable to persons who are vain and egocentric, who display labile and excitable but shallow affectivity, whose dramatic, attention seeking and histrionic behavior may go to the extremes of lying and even pseudologia phantastica, who are very conscious of sex, sexually provocative yet frigid, and who are dependently demanding in interpersonal situations.

To leave the hysterical personality for the moment, another sense in which hysteria has been used is to describe a particular form of psychosomatic symptomatology. This is, of course, the time honored conversion hysteria, the manifestations of which, certainly prevalent during the Middle Ages and earlier, occupied the attention of men of genius like Charcot, Janet and Freud during the middle and later 19th century. Since that time and especially after the first period of Freud's writings, the condition has received less attention, and there is a widely held belief that it now occurs much less often. It is certainly diagnosed less frequently than formerly but to what extent this represents a real and to what an apparent, decline in its occurrence is less obvious(5). In some hands the diag-

nosis of conversion hysteria is applied to almost any psychosomatic manifestation, certainly an undesirable practice. We agree with the distinction made by Franz Alexander(18) between the vegetative or organ neuroses and the conversion reactions, which restricts the use of the latter to reactions occurring predominantly in structures supplied by the voluntary nervous system, representing symbolic resolutions of emotional conflicts, while the vegetative neuroses result from excessive stimulation of sympathetically innervated organs and represent the physiologic concomitants of prolonged unresolved tension. When we refer to conversion reactions, we are using the term in this restricted sense.

What is the relationship between the hysterical personality and the so-called "hysterical" conversion reactions? Do the conversion reactions, as for example aphonia, paralysis of a limb, convulsions or loss of sensation over half the body without organic basis, occur only or principally in the kind of person who satisfies the criteria we have laid down for the hysterical personality, or are these manifestations available as psychogenic defensive operations in other personality types?

One way of approaching this problem is with a historical perspective. In the heroic age of "hysteria," when Charcot was demonstrating his "grandes hysteries" at the Salpêtrière, "hysteria" was diagnosed in terms of its often spectacular symptomatology rather than on the basis of particular personality characteristics. This was especially true because Charcot regarded hysteria as an organic degenerative disease rather than a psychogenic one. As this concept was gradually abandoned through the work especially of Bernheim and Freud and it came to be accepted that psychological causes play the major role, it was natural that more attention would be paid to the personality characteristics of patients displaying hysterical phenomena. It seems likely that as time went on, a certain group of personality traits became identified as likely to be present in patients showing conversion reactions. That this was a gradual, largely unconscious process is suggested by the fact that, so far as I am able to determine, Freud never described

the hysterical personality or used the term,* and that although the personality characteristics of hysterics were mentioned in many publications, there were no articles specifically on the hysterical personality until those of Reich(6) and of Wittels(7). We believe that a factor of great importance in the development of the present day concept of the hysterical personality as well as one of the reasons for the confusion existing about the subject, is the fact that at the time of Charcot it was widely (though not universally) held that "hysteria" was a disease only of women. Thus the diagnosis of "hysteria" was applied almost exclusively to women and the personality type which emerged as characteristic of "hysteria" was based on observation of and description of women alone.

The idea that the picture of the hysterical personality which gradually evolved in this manner was a description of the kind of people who developed symptoms of conversion hysteria thus was a natural consequence of the historical development of the concepts. That it is still a widely held belief is attested to by a good deal of the current relevant literature where a description of the hysterical personality is usually given as simply one of the manifestations of conversion hysteria and where no attempt is made to differentiate the two concepts. This is illustrated in a recent monograph on the diagnosis of "hysteria" by Abse(20) and it is stated unequivocally by Wechsler(16) who says "While the hysteric symptoms may come and go suddenly and inexplicably—, they do not generally sprout forth in persons who have not previously shown some of the general character of a hysteric personality." Marmor(9) implies the same thing when he speaks of hysterical symptoms and their underlying character structure. However, some authors hold a contrary view, that is, that the occurrence of conversion symptoms is not restricted to one particular type of personality. This is expressed by Kretschmer(12) who says "... different personality types which cannot be well brought to-

gether into a uniform picture are about equally disposed to the hysterical reactions." Bowlby(21) considers conversion hysteria and the hysterical personality to be two separate conditions. He examined 11 patients with what he regarded as conversion symptoms and came to the conclusion "that symptoms of so-called Conversion Hysteria are to be found in radically different types of personality." However, Bowlby's paper may be criticized on the grounds that his criteria for the diagnosis of a conversion reaction are so broad as to include examples of what we would call vegetative neuroses. The occurrence of what seem to be hysterical conversion symptoms in patients who subsequently develop schizophrenic psychoses is well known, as witness the paper of Noble(22).

In order to study this question of the relationship between the so-called hysterical conversion phenomena and the hysterical personality, the following investigation was made. The hospital charts of all patients who had had a discharge diagnosis of conversion reaction in the VA Hospital, Washington, D. C. between October, 1954, and October 1956, were reviewed. Thirty-six such charts were found and of these 19 were eliminated, leaving a total of 17 which could be included in the study. There were several reasons why those cases were not used in the series. The criterion previously described, for the diagnosis of a conversion reaction was adhered to, and if there was any question in the mind of the authors about this, the case was eliminated. This was also done if there was any considerable doubt about the presence of significant organic nervous system disease either as causing or influencing the symptoms. A number of the cases had been on the medical or surgical services and some of these, for one reason or another, had not had psychiatric consultations. Thus the 17 cases remaining included all who had unequivocal conversion reactions, uncontaminated by relevant neurological disease and who had been subjected to psychiatric investigation, in most instances conducted by the junior author of this paper, and in some cases, supplemented by psychological testing. The symptomatology represented included pains in various areas, headaches, paresis of a limb or limbs, tremors, sensory disturbances such

* His closest approach to this was in his paper on libidinal types(19) in which he described the erotic type as persons whose main interest is focused on loving and especially being loved, and suggested that this type is predisposed to the development of hysteria.

as hemi anesthetics, glove and stocking areas of sensory loss, monocular or binocular blindness, seizures, generalized weakness, aphonia and torticollis. No detailed analysis of the symptoms will be made here since this, along with other data and observations about this group of patients, will be the subject of another communication. For the purposes of this paper, we are primarily concerned with the personality types characteristic of the patients in the group. This was determined in each instance using the nomenclature of the *Diagnostic and Statistical Manual*, except in the case of the hysterical personality where the criteria described previously in this paper were used. Of the 17 patients there were 15 men and 2 women. None was felt to be a normal personality. The pathological personality types into which they fell are as follows:

Passive-aggressive personality		
Passive dependent	6	} 7
Passive-aggressive	1	
Emotionally unstable personality.....	2	
Inadequate personality	2	
Schizoid personality	2	
Paranoid personality	1	
Hysterical personality	3	
	—	
	17	

Thus of the 17 patients with unequivocal conversion reactions, only 3 satisfied the criteria we have laid down for the diagnosis of the hysterical personality. We consider it significant that these 3 included both women in the series leaving only one man of the 15 who could be considered an example of the hysterical personality.

These results are confirmatory of the opinions of Kretschmer (12) and Bowlby (21) and of the clinical impression of many who have worked with this kind of psychiatric material. We believe it can be stated that the so-called "hysterical" conversion reactions do not occur solely, by any means, in patients who present the characteristics of the hysterical personality. To put it another way, there is no single pattern of personality traits to be found in individuals presenting conversion phenomena, which can be considered to be symptomatic defensive operations available to many different sorts of

people. For this reason we believe, in cases in which the conversion symptomatology dominates the clinical picture, that the term conversion reaction should be employed rather than conversion hysteria, as is done in the case of the phobic state. In other instances, where other symptomatic manifestations are more important the conversion phenomenon should not be the sole basis for diagnosis but may be regarded as an incidental pathological defense. At the same time, there should be a place in the *Diagnostic Manual* for the hysterical personality since this is an important entity and deserves a diagnostic niche. The characteristics previously enumerated would provide criteria delimiting it. In cases in which conversion phenomena and the hysterical personality coexist, the diagnosis would be hysterical personality with conversion reaction. Thus for the portmanteau term conversion hysteria would be substituted one of the three more precisely defined diagnoses, conversion reaction, hysterical personality, or hysterical personality with conversion reaction.

But having said this, we are still left with the problem of the sex incidence of the hysterical personality, a problem which is exemplified by the findings in our series in which both women are included in the hysterical personality rubric while only 1 man of the 15 included fell into this category. This result only lends support to a fact which is widely recognized, that the hysterical personality is found far more often in women than in men. Indeed, it is this observation which probably lends support to the opinion of those who maintain that men do not develop hysteria. This was, of course, the prevailing belief (though Lepois (23) in the 16th century described male hysteria) until Freud declared the opposite before an unbelieving audience in Vienna. A recent example of this school of thought is a paper by Robins, Partell and Cohen (24), "Hysteria in Men," wherein it is stated that true hysteria probably does not occur in men or else is extremely rare. We believe that these apparently contradictory views can be resolved by the realization that "hysteria" is being used by the authors named in the two different senses of the hysterical personality and the conversion reactions. If "hysteria" is thought of in the former meaning it will be

found to occur more often in women than in men, while if the latter usage is being employed, it can be shown readily that both men and women develop conversion reactions. As a matter of fact, since in our culture today, these are often associated with the factor of monetary compensation, there may be more examples in the male sex than in females although we are not aware of any data supporting this possibility. Thus, some of the confusion over the occurrence of hysteria in men is essentially a semantic distortion which could be cleared up by the use of the two diagnostic terms, conversion reaction and hysterical personality, as previously suggested, instead of the blanket terms, "hysteria" or conversion hysteria.

There remain to be discussed possible reasons why the hysterical personality is so much more a condition of women than of men. Freud (24) has given an answer which is an outgrowth of his theories on the differing psychosexual development of women and of men. This explains the predisposition of women to hysteria as a consequence of the massive wave of repression necessary to effect the shift of libido from clitoral to vaginal erotogenicity and to repress the masculine component of their bisexual constitutions, in the transition from the phallic to the mature genital stage, a shift unnecessary in boys. In addition to the fact that Marmor (26) in a recent paper summarizes evidence casting doubt on the assumption that genital erogenicity in the female is normally transferred from the clitoris to the vagina, this explanation is unsatisfactory since it seems to imply that mature women who have successfully achieved genital (vaginal) sexuality would be prone, by reason of the tremendous effort of repression needed to reach this goal, to the development of the hysterical neurosis just as much as (or even more than) those in whom psychosexual maturation was incomplete. Another psychoanalytic explanation suggests that castration anxiety in the female tends to fixate her in the Oedipal stage while in men it tends to foster the resolution of the Oedipus complex (25). Both of these explanations rely strongly on the theory that each of the mental disorders can be limited to a certain level of libidinal development. As Knight (27) has pointed out, this has tended to present "a one-sided libidi-

nal theory of human functioning" which "needs to be supplemented extensively with the findings of ego-psychology." Marmor (9) in his paper which emphasizes the role of oral mechanisms in the hysterical personality suggests that the reason for the preponderance in females is that the traits characteristic of this personality are regarded by society as being feminine and thus more acceptable in women than in men.

We agree essentially with Marmor's explanation and believe it can be expanded. In the first place the historical development of the concept of "hysteria" made it inevitable that traits characteristic of women rather than men would be described since, as we have pointed out, only in women was the diagnosis made in the great majority of cases. Also the descriptions were being made entirely by male psychiatrists who may have elicited responses which might not have been obtained by a woman examiner. Thus what has resulted in the case of the hysterical personality, is a picture of women in the words of men, and, as a perusal of these traits will show, what the description sounds like amounts to a caricature of femininity! The truth of this can be seen if one attempts, as we have done, to apply the criteria for the hysterical personality to male patients, when one comes to the realization that the man who would most closely fit the description would be a passive homosexual. As a matter of fact, the one male in our series who was called a hysterical personality appeared very feminine. The description of the male hysterical personality in Reich's (6) paper also uses terms emphasizing femininity. A situation analogous to the one described might be imagined if women psychiatrists spent some generations coolly and rather inimically observing the less attractive foibles of males, and then put them together as the manifestations of a kind of personality characteristic of men! We have no doubt that some men could be found who would fit the description, since social and biological pressures have the effect of making available and acceptable modes of behavior which are different for women and for men.

Finally we would like to point out that the conception of the hysterical personality presented in this paper emphasizes what might be called the relativity of neurosis and per-

sonality disorders, that is, the importance of historical and cultural, as well as biological factors, to the understanding of emotional disturbances.

BIBLIOGRAPHY

1. Reichard, Suzanne: *Psychoan. Quart.*, 23: 155, April, 1956.
2. Purtell, J. J., Robins, Eli, and Cohen, Mandel C.: *J.A.M.A.*, 146: 902, 1951.
3. Ziegler, Dewey K., and Paul, Norman: *Dis. Nerv. Sys.*, 15: 30, 1954.
4. Kraus, von Heinrich: *Fortschritte der Neurologie Psychiatrie*, 21: 223, 1953.
5. Chodoff, Paul: *Psychiatry*, 17: 75, 1954.
6. Reich, Wilhelm: *The Hysterical Character in Character Analysis*. N. Y.: Orgone Institute Press, 1949.
7. Wittels, Fritz: *Med. Rev. of Rev.*, 36: 186, 1930.
8. Personal Communication.
9. Marmor, Judd: *J. Am. Psychoan. Assoc.*, 1: 636, Oct. 1953.
10. Hinselwood, E., and Shatzky, Jacob: *Psychiatric Dictionary with Encyclopedia Treatment of Modern Terms*. New York: Oxford Univ. Press, 1940.
11. Bleuler, Eugen, and Brill, A. A.: *Textbook of Psychiatry*. New York: MacMillan Co., 1924.
12. Kretschmer, E.: *Hysteria; Nerv. & Ment. Dis. Mono. Ser. #44*. New York: Nerv. & Men. Dis. Pub. Co., 1926.
13. Alexander, Franz and Ross, Helen: *Dynamic Psychiatry*. Chicago: The Univ. of Chicago Press, 1952, page 126, Chapter on Neuroses, Behavior Disorders and Perversions, Alexander and Shapiro, p. 146.
14. Fenichel, Otto: *The Psychoanalytic Theory of Neurosis*. New York: W. W. Norton & Company, Inc., 1945.
15. Noyes, Arthur P.: *Modern Clinical Psy.*, Philadelphia & London: W. B. Sanders, Co., 1934, 1939.
16. Wechsler, Israel S.: *A Textbook of Clinical Neurology*, Philadelphia & London: W. B. Sanders Co., 1927.
17. Siegman, Alfred J.: *Psychoanalyt. Quart.*, 23: 339, July, 1954.
18. Alexander, Franz: *Psychosomatic Medicine*, New York: W. W. Norton, 1950.
19. Freud, Sigmund: *Libidinal Types, Collected Papers, Vol. 5*, London: Hogarth Press.
20. Abse, D. W.: *The Diagnosis of Hysteria*. London: John Wright & Sons, Ltd., 1950.
21. Bowlby, John: *Personality and Mental Illness*. London: Kegan Paul, Trench, Trubner and Co., Ltd., 1940.
22. Noble, Douglas: *Psychiat.*, 14: 153, 1951.
23. Lepois, Charles: quoted by Robins, E., Purtell, J. J. and Cohen, Mandel E.: *New Eng. J. Med.*, 246: 677, May, 1952.
24. Robins, E., Purtell, J. J., and Cohen, Mandel E.: *Hysteria in Men*, *New Eng. J. Med.*, 246: 677, May, 1952.
25. Freud, Sigmund: *Three Contributions to the Theory of Sex, in The Basic Writings of Sigmund Freud*. New York: Modern Library, 1938.
26. Marmor, Judd: *Psychosomat. Med.*, 16: 240, May-June, 1954.
27. Knight, Robert: *Bull. Menninger Clin.*, 17: 1, 1953.

A NEW SYMBOL APPROACH TO PERSONALITY ASSESSMENT

THEODORE C. KAHN, PH.D., AND PAUL D. MURPHY, M.D.¹

Symbols are the meeting ground of many sciences and arts because they are one of the basic mechanisms of thought construction. One of the most primitive forms of adaptation is conditioning. Generalization follows, and fast on the heels of generalization comes symbol formation as a necessary element in the process of conceptionalization. When man first saw a lion he generalized that all such yellow shaggy-maned creatures were to be avoided and thus he saved his life. But soon this dangerous animal came to represent power and dominion. Kings and tribal chieftains used pictures of lions as badges of authority and, in the Middle Ages, this animal became one of the most popular symbols on the coats-of-arms which were an essential part of heraldry.

Since symbols permeate all human activity, it is not surprising to see the important role that is assigned to symbols in psychoanalytic theory, projective testing, sociology and in the objective sciences such as physics and mathematics. Yet among psychological techniques of personality evaluation, symbols have been treated with relatively scant respect. Of course there is no psychological test in existence in which the symbolic nature of the responses is not crucial to the interpretation. We can not get away from symbols if we wish to study personality. However, there have been few, if any, techniques where an outright attempt is made to study culturally structured symbols as an aspect of man's thinking. Psychological tests which revolve around the idea of symbols are rare, especially those where the test materials, by virtue of their construction, are first enmeshed in the culture and then in the individual psyche.

A test for personality assessment using culturally structured object symbols, known as the Kahn Test of Symbol Arrangement (6) has been fully described elsewhere (8). The Rorschach which was developed by essaying individual or small group reaction to a given set of stimuli is typical of the meth-

odology of test constructionists. In some cases the construct or idea precedes the testing of the instrument's validity. In others, ideas or rationales are held in abeyance until so-called empirical evidence accumulates with sufficient strength to permit theory formation. Each of these approaches has its advocates and critics. No matter which approach is taken, the test theories evolved are soon challenged by other investigators who use different groups and obtain different results. Frustrations from conflicting, contradictory, inconclusive "evidence" of test validity have inspired some psychologists to advocate the "cook book" approach to personality testing. Such psychologists suggest that a statistical tabulation of "yes, no," and "I don't know" responses to a series of written questions yields the most practical and only scientific approach to the probing and cataloging of the mind—the complexity of over nine billion unpredictable neural synapses in the human cortex notwithstanding.

The approach to behavior through culturally structured symbols has been different from the very beginning. No new pictures, blots, designs, forms or geometric shapes were thrust upon students of Psychology (A) or other unsuspecting victims of psychological test validation. This came later. The first step was to find something which already had meaning and significance. It was necessary to find something about which there could be relatively little argument. Something had to be discovered which everyone from butcher to candlestick-maker, from boy scout to admiral of the fleet, would agree has *meaning*. Such diverse persons had to agree not only that meaning was there but that special meaning was present—in other words, that the meaning was limited to a well defined area of thought and experience and that this was the same for them all. This can happen only if the meaning is conveyed to the subject through cultural infiltration as well as through the individual cognition. Only if individual conceptualization is mediated through cultural processes can such unanimity of interpretation be expected.

¹USAF Hospital and Mental Hygiene Clinic, Wright-Patterson A.F.B., Ohio.

How can proof be obtained that meaning exists? The answer was *money!* Living in a rather materialistic world we came to the conclusion that if people were willing to pay for something with the coin of the realm, the purchase represented a real need of some kind—real in the sense that the buyer believed it to be real. Few, if any, psychological test materials would be bought by the average man on the street for their intrinsic worth. We can not conceive of any sane person buying ink blots or Thematic Apperception Test cards simply because the inherent beauty of these materials appeals to him. The job was to find some materials which had *a priori* appeal as proven by the fact that very many people were willing to lay out cash for them and that a cool-headed businessman was solvent only because the demand for the objects was sufficiently large and universal to enable him to make a profit.

Such objects were found in a hobby shop in Los Angeles in 1949. This was described in the first validation study as follows:

The idea of using plastic shapes of common objects for personality diagnosis occurred while observing purchases of such objects in a Los Angeles hobby supply shop. An object's appeal depended on its size, color, material and shape. Forms most liked by some people were ignored by others. The question arose—could the acceptance, rejection, and the manner of handling specific objects give insightful information regarding an individual's personality dynamics, his state of mental health or his cerebral competence(8)?

Fifteen such objects were finally used in the construction of a test of symbol arrangement. The subject is required to arrange these on a flat strip which is marked off into 15 consecutively numbered segments of equal size. He is asked to give his reason for the arrangement. He does this twice to enable him to change his first method of arranging the objects if he wishes. The next step involves having the subject interpret each of the objects symbolically in the sense that the American flag is symbolic of the United States as a nation. When this is done, the strength of the configuration created by his arrangement is tested by asking him to recall the previous arrangement. A final procedure requires him to arrange the objects in order of his preference and then to sort them according to their meaning. The whole pro-

cedure takes from 10 to 20 minutes. A scoring method, derived from t-ratio comparison of normal and clinical groups, enables the examiner to draw a graph of symbol-conception and to describe a symbol pattern. Scoring takes approximately 5 minutes(6).

The objects used on the test are: 3 heart shapes differing in color, size, thickness, and translucency; 3 stars, 2 of which are identical; 2 butterfly shapes varying in outline, size, width, and color; a green amorphous object; a blue anchor; a transparent circle; an equilateral cross; 3 dogs often seen as a family by the subject. Two of these dogs are alike except in color, the third resembles one of the others in color but not in shape. If one wishes to combine the items in the arrangement on the strip for their cultural associations, one must sacrifice dozens of other logical methods of arranging them, such as color, size, appearance, etc. Some insight into the strength and nature of the "cultural pull" that these objects elicit in a given individual may be gained by a comparison of his performance with a norm group.

This approach to the personality has been described by Shoben as "... the KTSA (Kahn Test of Symbol Arrangement) is a simpler, more widely applicable situation than most instruments on hand for investigating developmental patterns and various attributes by psychopathological behavior(14)." The work of Fils(4), Brodsley(1), Esterly(3), Szenas(15), and Walkup(16) has born out this contention. The all encompassing nature of cultural symbols is further indicated by the studies of Shafer(13), Goulding(5) and Kahn(7, 9, 11, 12).

SUMMARY

Psychologists have overlooked the possibility of first going to the culture and then to the individual in obtaining ideas for the construction of psychological instruments. A test of symbol arrangement has been developed in which this procedure has been reversed. Objects with established cultural validity were used to study and to classify human behavior. A number of studies were cited to show the wide applicability of this cross-disciplinary approach to psychological testing.

BIBLIOGRAPHY

1. Brodsky, W. J. Master's Thesis, Univ. Southern California, 1952.
2. Brower, D., and Apt, L. E. Progress in clinical psychology, Vol. I. New York: Grune & Stratton, 1952.
3. Esterly, G. R. Master's Thesis, Trinity Univ., 1954.
4. Fils, D. H. Ph.D. Thesis, Univ. Southern California, 1950.
5. Goulding, A. V. Ph.D. Thesis, New York University, 1956.
6. Kahn, T. C. Manual for the Kahn Test of Symbol Arrangement. Monograph: Southern Universities Press, Box 11, Grand Forks, N. D. 1956.
7. Kahn, T. C. Outline of some interpretive possibilities of the Kahn Test of Symbol Arrangement. USAF, WPAFB. 1956.
8. Kahn, T. C. J. Consult. Psychol., 15:439, 1951.
9. Kahn, T. C. J. Consult. Psychol., 19:130, 1955.
10. Kahn, T. C. A comparison of psychotics with brain damage and non-psychotics on an original test of symbol arrangement. Paper presented at 31st annual meeting of the Western Psychol. Assoc., San Jose, 1951.
11. Kahn, T. C. A comparison of the clinical data yielded by a test of symbol arrangement with other findings of suicidal patients. Paper read at the 32nd annual meeting of the Western Psychol. Assoc., Fresno, 1952.
12. Kahn, T. C. J. Project. Techniques, 19:431, 1955.
13. Shafer, M. R. Performance of sexual psychopaths on the Kahn Test of Symbol Arrangement. Unpublished research, Medical Facility, Calif. Department of Correction, San Pedro, 1952.
14. Shoben, E. J. Review: Kahn Test of Symbol Arrangement, Fourth Mental Measurement Yearbook. Highland Park: Gryphon Press, 1953.
15. Szenas, J. J. Master's Thesis, Trinity University, 1954.
16. Walkup, G. L. Performance of thirty patients with organic cerebral pathology on the Kahn Test of Symbol Arrangement. Unpublished research conducted at the San Antonio State Mental Hospital, Texas, 1954.

PROGNOSTIC VALUE OF PERCEPTUAL DISTORTION OF TEMPORAL ORIENTATION IN CHRONIC SCHIZOPHRENICS

JOHN LANZKRON, M.D.,¹ AND W. WOLFSON, PH.D.

The word "orientation" derives from the Latin word "orient"—rising, because the seamen used to look for the rising sun to determine the East and thus find their bearings. In psychiatry, "orientation" refers to the knowledge of one's own temporal, personal, and spatial relationship. An individual has intact orientation if he relates himself correctly to his surroundings including the concept of time. Intact orientation depends on intact perception and on the intact integration of this perception. Perception is the mental process by which the nature of an object or image is recognized by arousal of associative memory complexes. In organic brain disorders orientation is often impaired because of impairment of memory associations. In schizophrenia, as Bleuler emphasized, memory as such is not disturbed. However, "the capacity for associative recall of memory images is certainly altered." This causes, according to Bleuler (1), considerable secondary disturbances of integration of perception concerning spatial and temporal orientation. He described the phenomenon in schizophrenia which he called "double orientation" wherein a patient expresses a delusion about time, place and person while at the same time he also knows, in a purely intellectual sense, the actual relationship existing between him and time, place, and person. The delusion takes precedence over the real fact. In 1955 Mettler (2), an organicist, expressed the belief that as a result of perceptual difficulty a gradual dissolution between real external and personally induced internal existence occurs, making it difficult or impossible for the schizophrenic to establish contact with reality.

In working with a large group of chronic male patients in the Middletown State Hospital a psychopathological phenomenon was noted in many of the chronic deteriorated

schizophrenic patients which might best be called "perceptual distortion of temporal orientation." It seems to be rather pathognomonic in the chronic, dull, apathetic, regressed schizophrenic patients and of great prognostic value when present, suggesting unfavorable outcome.

When such patients were questioned about their year of birth and the present date, they often gave the correct answer, but when asked their age they frequently gave an age which coincided with the age at which they became ill or were hospitalized. The age they now claimed to be was often a fraction of their true age. When questioned further about this obvious discrepancy, they gave explanations such as the following: 1. A 60 year old patient said "I know I should not have white hair since I am only 28 years old." 2. Another patient stated, "Oh, yes, I was born in 1900 but I am only 25 years old; it is somebody else who is 57 years old." In both cases, the age claimed by the patients coincided with their age upon admission. Those patients exhibiting this phenomenon distort their perception of external reality to such an extent that it conforms with their dereistic world.

In a preliminary clinical investigation of the nature and significance of this unique psychopathological phenomenon, first noticed by the senior author J. L., 50 patients who, according to the case histories, had shown a perceptual distortion of temporal orientation, were interviewed. Each patient was asked the following questions:

1. What year is it now?
2. How old are you?
3. When were you born?
4. Who is President of the United States?
5. How much does a package of cigarettes cost?
6. How much does a new Chevrolet car cost?

¹ Address: Box 1453, Middletown, N. Y.

The resulting figures in Table 1 show the following relationship:

TABLE 1

PERCEPTUAL DISTORTION OF TEMPORAL ORIENTATION
IN 50 CHRONIC SCHIZOPHRENICS

	Mean	Standard deviation
Real age of patients.....	47.54 years	9.96 years
Age claimed by patients..	26.04 years	6.90 years
Age at admission.....	25.40 years	6.07 years
Duration of illness.....	22.32 years	10.42 years

Definition:

The standard deviation depends on the homogeneity or variability of the data. Approximately 3/4 of the cases are contained within plus or minus one standard deviation of the mean.

The real mean age of the 50 interviewed regressed schizophrenic patients who showed perceptual distortion of temporal orientation was 47.54 years with a standard deviation of 9.96 years. The mean age given by these patients upon questioning was 26.04 years with a standard deviation of 6.90 years. When the mean age claimed by these patients was compared with their mean age on admission, an astonishing relationship was found. The mean age claimed was approximately equal to their mean age on admission, plus 7 months. That suggests that they generally took less than a year, after the illness was sufficiently severe to warrant hospitalization, for the temporal orientation to become arrested. What on admission was correct perception of age, did not grow with the years and, being static, became more and more distorted as time went on and the real age increased. The very great and highly significant statistical difference in the real and stated ages—namely 21.50 years—demonstrates the extreme degree of distortion in temporal orientation. The duration of illness with a mean of 22.32 years and a standard deviation of 10.42 years reflects the chronicity of their illness. Only 35 out of 50 patients were able to state their birthday correctly and only 18 were able to give the present year correctly. All others gave prior years. The fact that all who showed distortion, did so in a backward direction, suggests that for many of these patients time has essentially stopped. This correlates with the

fact that none of the patients gave a chronological age in excess of his true age, as is encountered in the confused organic cases.

TABLE 2

RESPONSES TO SUPPLEMENTARY QUESTIONS

Question	Response	Number
	President Eisenhower ..	5
	Previous presidents	30
President of the United States...	Other names	5
	No reply	10
	Less than \$.21	27
	\$.21 to \$.28	5
Cost of package of cigarettes	More than \$.28	2
	No reply	16
	Less than \$1,000	16
	\$1,000 to \$1,500	4
Chevrolet	\$1,500 to \$3,000	5
Cost of new car	More than \$3,000.....	8
	No reply	22

Data on the President, cost of cigarettes, and cost of new Chevrolet are presented in Table 2. These data imply that the distortion is apt to not only refer to the very personal area of age but is also likely to be shown in other areas. In other words, the data suggest that with a person whose distortion of his perception of his own position in time is say, 10 years, one might well expect some of his values and concepts to be similarly distorted to the same degree as the personal temporal perception.

SUMMARY AND CONCLUSION

The data obtained by systematic investigation have proven the clinical observation of perceptual distortion of temporal orientation in regressed schizophrenics. The fact that the mean stated age was approximately equal to the mean age on admission plus 7 months suggests that it took, on the average, a relatively short time after admission for the temporal orientation to become arrested. It also suggests that apparently hospitalization took place rather late in the course of the disease despite the relative youth of the patients. With increasing age the distortion becomes more conspicuous. These observations dramatically illustrate the known clinical fact of the importance of early treatment before permanent distortion sets in. Since we have not found this phenomenon in other than

clinically dull, apathetic, and regressed schizophrenics we are led to interpret its presence as indicative of poor prognosis, and of differential diagnostic value. This preliminary investigation lends credence to Mettler's contention(2).

There is reason to believe that prognosis based on the presence or absence of perceptual disorder would be more reliable and indicate results earlier than prognosis that relies mainly on evidence of presence or absence of affect. The psychiatric patient, like any other, is to be studied as a whole personality possessed of structure and organic function as well as psychodynamic mechanisms.

It is noteworthy, that even in those chronic regressed schizophrenics, whose behavior and hospital adjustment improved following ECT and/or Thorazine medication, the perceptual distortion of temporal orientation remained unaffected.

BIBLIOGRAPHY

1. Bleuler, Eugen. *Dementia Praecox or the Group of Schizophrenias*. New York: International Univ. Press, 1950.
2. *Year book of Neurology, Psychiatry and Neurosurgery 1955-56*. Edited by MacKay, Wortis, and Bailey. Chicago: The Yearbook Publishers, 1956.

CLINICAL NOTES

VESPRIN AND MOPAZINE: TWO NEW PHENOTROPIC SUBSTANCES

H. AZIMA, M.D., H. DUROST, M.D., AND C. CAHN, M.D.¹

In the search for more effective and less toxic phenotropic drugs the effects of 2 new substances, Vesprin² and mopazine³ were studied in gross clinical aspects of mental syndromes.

Vesprin, a phenothiazine derivative containing fluorine was administered to 47 patients (17 schizophrenics, 14 manic-depressives and 16 neurotics) with a daily dose range of 50-200 mgm for an average period of 4 weeks. There were 15 females and 32 males with an average age of 35. The criteria of improvement consisted of 4 items: ward management; subjective comfort; ability to go home, and ability to work(1). An increase or amelioration in 4, 3 or 2 of these criteria was categorized as marked, moderate or slight improvement respectively. All patients were concomitantly on supportive psychotherapy. Moderate improvement was observed in 14 patients (3 schizophrenics, 6 manic-depressives and 3 anxiety neurotic states) and slight improvement in 9 patients. Side effects consisted of: extrapyram-

idal symptoms of 9 cases, beginning in jaw muscles and spreading to the trunk; anxiety in 9 cases, in 5 of which it was related to the motor disturbances; inhibition, marked in one case in form of total immobility without rigidity; sleepiness in 5 cases. Weekly liver function tests, blood counts and urine analysis did not show any alteration. Blood pressure change was minimal. The general impression was that the drug was a potent substance, therapeutically effective in doses below 200 mgm daily; and that because of its complex action which went beyond mere tranquillization it required further study.

Mopazine, another phenothiazine derivative, was administered to 44 patients (11 schizophrenics, 11 manic-depressives, 16 neurotics and 6 organic psychotic states) with a daily dose range of 100-1200 mgm for an average period of 4 weeks. Only 9 patients showed slight improvement. There were no side effects. The general impression was that the drug was too weak, not requiring further investigation.

¹From McGill University, Dept. of Psychiatry, Allan Memorial Institute and Verdun Protestant Hospital, Montreal.

²Squibb's MC 4703.

³Poulenc's R.P. 4632.

BIBLIOGRAPHY

1. Azima, H., and Durost, H.: *Canad. Med. Ass. J.*, 77:671, 1957.

TRIFLUPROMAZINE AND TRIFLUOPERAZINE: TWO NEW TRANQUILIZERS

L. H. RUDY, M.D.,¹ F. RINALDI, M.D., E. COSTA, M.D.,¹ H. E. HIMWICH, M.D.,¹
W. TUTEUR, M.D.,² AND J. GLOTZER, M.D.²

Since the introduction of chlorpromazine there have been systematic attempts to find more active compounds related to it. At Galesburg State Research Hospital, Galesburg, Ill and Elgin State Hospital, Elgin, Ill. joint pilot studies have recently been com-

pleted on two compounds both phenothiazine derivatives, triflupromazine and trifluoperazine. In both compounds the chlorine atom of the phenothiazine nucleus has been replaced by carbon trifluoride (F₃). This differentiates triflupromazine from chlorpromazine (Thorazine) and trifluoperazine from prochlorperazine (Compazine).

¹Galesburg State Research Hosp., Galesburg, Ill.

²Elgin State Hosp., Elgin, Ill.

Animal studies at Galesburg State Research Hospital had proven these two compounds to be both active and safe. The compounds were then given to 47 psychotic and 22 feeble-minded patients. The majority of the 47 psychotics were schizophrenics with long histories of hospitalization; the 22 feeble-minded patients had histories of prenatal, birth or infancy brain damage.

Elgin State Hospital joined the study with 24 acutely disturbed, recently admitted female patients showing agitation, combativeness and noisiness immediately prior to being placed on the drugs.

In the study the double-blind method was followed according to the following schedule of 4 periods of 6 weeks each: 1. trifluoperazine (10-120 mg. daily); 2. placebo; 3. triflupromazine (100-800 mg. daily); 4. placebo. Daily examinations were made by individual physicians and evaluations were made every 3 weeks by the research staff.

Triflupromazine appears to be an active compound bringing about tranquilization and other improvements of psychiatric symptoms similar to those obtained with chlorpromazine but faster; the effective daily dosage ranged between 200-600 mg. This drug

seems to be the most active phenothiazine derivative; its effective daily dosage oscillated between 20-60 mg. to produce tranquilization and various improvements of psychotic symptoms.

The two drugs were not without side effects. Triflupromazine had a slight hypotensive effect perhaps less intense than that of chlorpromazine, while trifluoperazine did not produce a consistent change of blood pressure in the majority of patients. Both drugs produced mild parkinson-like symptoms in several instances. Lactation appeared with both drugs in the female patients of the younger age group. Unsightly weight gains were absent in all cases with both drugs. No case of jaundice was observed with either drug. The appearance of convulsive seizures in the feeble-minded patients with brain damage was not observed with the administration of either drug.

In the Elgin State Hospital group of recently admitted patients social recoveries resulting in discharges occurred in 6 of 12 patients treated with triflupromazine and in 7 of 12 patients treated with trifluoperazine. Continued treatment with each drug is strongly indicated after discharge.

TRINURIDE H: A NEW ANTIEPILEPTIC DRUG

REPORT ON A PILOT CLINICAL TRIAL

STEPHEN KRAUSS, M.D.¹

Considering that just 100 years ago the bromides were introduced into the treatment of epilepsy in England, the drug therapy of epilepsy has been remarkably rich in developments. The most important of these was the introduction of the barbiturates which, but for the search for more potent drugs and those specially suited for the subgroups of epilepsy, could still reign undisputed. A wide range of more recent drugs (hydantoins, acylureas, diones, primidon or mysoline) have tried to cover those requirements. Furthermore, focal epilepsies have now become accessible to neurosurgery guided by electroencephalography. However, the search continues for that "ideal" drug which would combine absence of toxicity, absence of soporific and other side-effects and general applicability to all forms of epilepsy.

In 1952 Frommel and co-workers in Geneva brought out a new acylurea-derivative which appears to be of great promise. "Phenuron" is already well known in the U.S.A., but considerably toxic. The new substance, phenylethylacetylurea, was proved, in animal experiments, to have only a small fraction of the toxicity of Phenuron and still to have a high anticonvulsive property when used with electroplexy. The new compound "Trinuride H," subsequently introduced, contains in one tablet phenylethylacetylurea 0.200 g, diphenylhydantoin 0.040 g and phenobarbital 0.015 g (the first small admixture effecting potentiation, the second combating initial excitation). Clinical workers in Switzerland, Belgium, Italy and Portugal have already reported very encouraging results with Trinuride H (the main authors being

¹ Fair Mile Hosp., Wallingford, Berks., England.

Sorel and Furtado). The present report is the first one in the English literature.

Twelve idiopathic grand mal patients (males aged 24 to 62) were subjected to a trial lasting 8 months. By gradual replacement of the preceding medication (phenobarbitone plus epanutin) which is of great importance, the standard dosage of 4 tablets daily (2 mane plus 2 nocte) was reached within 4 weeks. Assessment of the results was based on the comparison between the average monthly number of fits during trial with the corresponding fit number during the 8 months preceding the trial. In cases of "marked improvement" (4) this monthly fit number was reduced from a multiple of 1 to 1 only or nil; 3 other cases were classified as "improved," 3 as "not improved" and 2 did not complete the trial. In some cases

an occasional shift from grand mal to petit mal was observed. Regular examinations of the urine and bloodcounts which were carried out did not reveal any adverse effect. In our material consisting of chronic psychotic and mentally defective epileptics periods of confusion and irritability did occur in the first few months, but subsided. From regular entries of the nursing staff on the behavioral aspect it became evident that in the later stages both individual and group manageability improved.

Stress must be laid on the complete absence, with Trinuride H medication, of drowsiness so often observed with other antiepileptic drugs. This seems to hold promise in respect of the ambulant and intelligent epileptic, numbering thousands, whose employability is of great economic importance.

THE EFFECT OF CHLORPROMAZINE IN REDUCING THE RELAPSE RATE IN 716 RELEASED PATIENTS: STUDY 3

BENJAMIN POLLACK, M.D.¹

In previous publications the writer has reported the results of adding chlorpromazine to the treatment program of patients released from the Rochester State Hospital. The first study (1, 2) indicated that this drug appeared to have a marked effect in reducing the expected relapse rate. A subsequent report (3) on a second series of 250 patients seemed to confirm this original impression.

The present study consists of 316 patients who at one time had been admitted to the Rochester State Hospital and subsequently released. This is part of a cooperative study which was made with several other selected hospitals in New York and other states. The total study will be reported at a later date. We have now treated with chlorpromazine approximately 5,000 patients, and this continues to be the major drug used in our psychopharmacotherapeutic treatments.

This series of 316 released patients brings to a total of 716 the number of patients followed by this investigator to determine the effect of chlorpromazine upon the relapse rate. These 316 patients had received chlorpromazine in the hospital and were subse-

quently released. An attempt was made to continue all patients upon this medication, but, as can be noted from table one, only 133 continued to take their medication regularly during the total observation period. The series includes all patients who had received chlorpromazine in the hospital and who were released between May 1, 1956, and September 30, 1956. No other selection was made. Where possible an attempt was made to have the patient continue to take the medication regularly, but it is difficult to have patients take medication when they feel well.

In this study special charts were evolved and a definite and consistent pattern of reporting was instituted. Each patient, where possible, was carefully and regularly followed during the period of study from May 1, 1956, to May 1, 1957. Thus all patients were followed for at least 6 months and others for a period of one year. Patients were seen regularly in the outpatient clinic and also at their homes by social workers. Because most of the patients admitted to the Rochester State Hospital come from an area fairly adjacent to Rochester, it was possible to interview such patients frequently. Of the entire group of 316 patients the treat-

¹ 1920 South Ave., Rochester, N. Y.

TABLE 1

RELEASES MAY 1—SEPTEMBER 30, 1956 OF 316 HOSPITAL CHLORPROMAZINE TREATED PATIENTS AS OF MAY 1, 1957

Status—on return or last survey	Total returns	Percentage of total releases	Returns May 1, 1957 still in hospital
On regular medication..... 133	23	7	19 (6%)
No medication, medication unknown or irregular medication 183	79	25	41 (13%)
Totals 316	102	32	60 (19%)

ment status of only 9 at the termination of this study could not be accurately ascertained.

Table 1 shows that there was a marked difference in the relapse rate of patients who had continued regular treatment as compared with those who had not. This group of 133 patients had a relapse rate of only 7% of the total series. When the relapsed patients in this group were retreated with chlorpromazine, four of the 23 patients were shortly released from the hospital. Of the 183 patients who had received no medication or intermittent or irregular medication, 79, or 25% of the 316 patients, returned to the hospital. When the 79 patients were retreated with chlorpromazine in the hospital, 38 patients left shortly. Thus, it could very well be suspected that many of the patients who had discontinued treatment might not have had to return had they followed instructions and continued their medication.

In both groups regular psychotherapy and guidance by our social service staff were available to all patients. There appeared to be no essential difference in the environmental factors.

Table 2 indicated 70% of the released pa-

TABLE 2

YEAR OF ADMISSION OF ABOVE CONVALESCENT CARE PATIENTS

1956	50%
1955	20%
1954	9%
1953	7%
1952	2.5%
1951	2.5%
1950-1930	9%

tients had been in the hospital 2 years or less and almost 14% had been in the hospital for a period of 5 years or more. Surprisingly, 9% of this group consisted of patients who

TABLE 3

DIAGNOSES OF ALL 316 PATIENTS IN SURVEY

Diagnoses	Total	Out of hospital	Returned to hospital as of May 24, 1957
Dementia praecox	154	124	30
Involitional psychosis, melancholia.....	26	21	5
Involitional psychosis, paranoid.....	17	16	1
Psychosis with cerebral arteriosclerosis.....	30	23	7
Senile psychosis	4	3	1
Manic-depressive psychosis, manic.....	12	8	4
Manic-depressive psychosis, depressive.....	8	5	3
Psychosis with psychopathic personality.....	8	6	2
Psychoneurosis	18	18	0
Psychosis with convulsive disorder.....	7	6	1
Psychosis due to trauma.....	1	1	0
Psychosis due to alcohol.....	11	10	1
Psychosis with mental deficiency.....	7	7	0
Behavior disorder	7	6	1
Psychosis due to drugs.....	4	4	0
Psychosis with epidemic encephalitis.....	1	1	0
Undiagnosed	1	1	0
Totals	316	260	56

had been in the hospital for 6 to 25 years and had been given various other forms of treatment without success. This table would thus indicate the effectiveness of chlorpromazine in helping chronic mental patients to such a degree that they can be cared for fairly comfortably outside of the hospital without much danger to themselves or others.

It can be seen from the diagnostic table 3 that almost half of the released patients consisted of schizophrenics and the others of various diagnostic categories. Those patients who had as part of their psychosis paranoid ideation or disturbed conduct seemed to do very well. These symptoms were kept under good control. It would appear from our findings that regular medication is much superior to intermittent medication given according to acute need.

This study confirms the previous findings that the addition of chlorpromazine to other therapies given to released state hospital patients is markedly effective in reducing the relapse rate to $\frac{1}{4}$ to $\frac{1}{3}$ of the usual or expected rate. In the total series of 716 patients the relapse rate was approximately 7% in the drug treated group. Psychopharmacotherapy, therefore, appears to be consistently effective in reducing the relapse rate as noted in the three studies so far reported. It must be stressed that drug therapy by itself is not nearly as effective as when combined with all the other psychiatric tools available.

BIBLIOGRAPHY

1. Pollack, B.: Chlorpromazine and Mental Health, Philadelphia: Lea & Febiger, 1955.
2. ———, Mental Hospitals, April, 1956.
3. ———, Am. J. Psychiat., 112: 938, May 1956.

CHEMOTHERAPEUTIC TRIALS IN PSYCHOSIS: III

2-BROM-D-LYSERGIC ACID DIETHYLAMIDE (BOL 148)

WM. J. TURNER, M.D., AND SIDNEY MERLIS, M.D.¹

The singular properties of lysergic acid diethylamide (LSD) have led to much speculation regarding a chemical pathogenesis of schizophrenia (1, 2, 3, 4). There is a growing body of evidence that the slightest alteration of the amide group in LSD lowers or abolishes the psychic action of the molecule (5, 6, 7, 8). *Pari passu* with this there is also a decrease in the anti-serotonin activity as measured by several *in vitro* tests (9, 10). A striking exception is 2-brom-LSD (BOL 148)² which equals LSD in anti-serotonin activity *in vitro*, but of which the only psychic action appears to be mildly sedating (10, 11). It should be observed that the extreme specificity of LSD, possibly no more than 1 microgram being required in the central nervous system to produce marked alterations of psychic function (12), points to the requirement that more than one, and possibly as many as three,

binding sites be occupied by the molecule simultaneously or in strict stepwise manner on one or more enzyme molecules. This being so, it would appear that the 2-brom derivative is no longer able to occupy all the sites fitted by LSD.

Recently Ginzl and Mayer-Gross (13) reported that BOL 148 administration prior to LSD inhibited the LSD effect in man. Conceivably some of the schizophrenic syndromes might in some instances be secondary to a metabolic occurrence related to production and fixation within the central nervous system of increased amounts of serotonin (2, 3), the fixation occurring on those binding sites available also to LSD. If so, then the administration of BOL 148, which might attach only to certain sites, might release the bound serotonin without production of LSD effect, and lead either to exacerbation or relief of the symptoms attributable to the serotonin fixation.

To test this, we administered to 6 chronic schizophrenic subjects BOL 148 at the rate of 1 mg. t.i.d. for 2 weeks; 2 of these and a third subject then received 5 mg. q.i.d. for 3 days.

¹ Research Division, Central Islip State Hospital, Central Islip, N. Y.

² This was prepared by Sandoz Pharmaceuticals of Basel. We are indebted to Dr. R. Bucher of Sandoz Pharmaceuticals for generous supplies of BOL 148.

The patients had all been on our Research Ward for some time and had been involved in considerable study prior to the introduction of BOL 148. Their ways of responding to personnel, to one another, their daily variations, and the finer nuances of their psychotic ways of life were well known. For instance, two patients had double orientation and consciousness; one of these was aware of her double "life" and in the lucid phase, which was one of friendly, ready cooperation, coherence and honesty, could report on the other phase as one reports a dream.

In the testing situation the previously existing attitudes were maintained, and the same types and intensity of contacts were continued. Since the patients had been on medication trials previously, though not immediately preceding the BOL 148, it was natural to continue asking relevant questions.

Aside from the comments by two patients while on the lower dosage that they felt more refreshed by sleep, and food tasted better, there was no evidence of any psychic alterations in any of our subjects. It is particularly noted that the patient with double consciousness described above was unable to note any change in either of her phases of consciousness. That this was not due to the choice of fixed, unresponsive patients, was indicated by the fact that one of these patients later responded very well in milieu and psychotherapy, while two others reacted some weeks later to 50 microgram doses of LSD, just as other psychotic subjects have done in our experience (14).

We have been exploring chemical theories of schizophrenogenesis for some years. We recognize that the present study is indecisive

for any of these theories. It is, however, a weight in the balance, not in favor of any simple, direct, causal relationship between serotonin metabolism and schizophrenia. Beyond this we do not feel justified in going.

SUMMARY

BOL 148 administered to chronic schizophrenics, 1 mg. t.i.d. to 6 subjects for 2 weeks, or 5 mg. q.i.d. for 3 days to 3 subjects, had no evident effect on their psychoses.

BIBLIOGRAPHY

1. Rinkel, M., DeShon, H. J., Hyde, R. W., and Solomon, H. C.: *Am. J. Psychiat.*, 108: 572, 1952.
2. Gaddum, J. H.: *J. Physiol. (Brit.)*, 121: 15P, 1953.
3. Woolley, D. W., and Shaw, E.: *Brit. Med. J.*, 1954/II, 122.
4. Whitelock, O. v. St., Ed.: *Ann. N. Y. Acad. Sci.*, 66: 417, March 1957.
5. Solms, H.: *Praxis*, 45: 746, 1956.
6. von Felsinger, John M., Lasagna, Louis, and Beecher, H. K.: *J. Clin. & Exper. Psychopathol., and Quart. Rev. Psychiat. & Neurol.* 17: 414, 1956.
7. Geronimus, L. H., Abramson, H. A., and Ingraham, L. J.: *J. Psychol.*, 42: 157, 1956.
8. Abramson, H. A.: Personal Communication.
9. Evans, L. T., Geronimus, L. H., Kornetsky, C. and Abramson, H. A.: *Science*, 123: 26, 1956.
10. Cerletti, A., and Konzett, H.: *Arch. Exper. Path. Pharmac.*, 228: 146, 1956.
11. Cerletti, A., and Rothlin, E.: *Nature*, 176: 785, 1955.
12. Stoll, A., Rothlin, E., Rutschmann, J., Schalch, W. R.: *Experientia* 11: 396, 1955.
13. Ginzler, K. H., and Mayer-Gross, W.: *Nature*, 178: 210, 1956.
14. Abramson, H. A., Hewitt, M. P., Lennard, H., Turner, W. J., O'Neill, F. J., and Merlis, S.: *The Stablemate Concept of Therapy as Affected by LSD in Schizophrenia*, in press.

ADRENOCHROME IN BLOOD PLASMA

A. HOFFER, M.D.¹

The striking psychotomimetic effect of microgram quantities of lysergic acid diethylamide and the similarity of the induced experience to some clinical manifestations of schizophrenia has stimulated interest in the mechanism of LSD-25 activity. Physiological properties recently discovered for LSD-

25 suggest at least 3 possible mechanisms of activity—(A) an interference centrally with serotonin as a neurohormone (1), (B) interference with parasympathetic activity by inhibiting choline esterases (2), and (C) some disturbances in adrenaline metabolism (3).

The last two mechanisms and especially the third appears to account most satisfactorily

¹Address: University Hospital, Saskatoon, Sask.

for the clinical and physiological changes. Thus LSD-25 produces increases in the secretion of adrenaline (4), an increase in cellular activity of the adrenal medulla (5) and an increase in the concentration in plasma of adrenaline oxidases (6, 7).

In our laboratory LSD-25 given to 5 normal subjects (100 micrograms by mouth) and three sober alcoholics (200 to 300 micrograms) markedly increased adrenochrome levels in plasma as shown in the following table.

TABLE SHOWING ADRENOCROME LEVELS (μ g/LITER)
IN PLASMA AFTER ORAL ADMINISTRATION
OF LSD-25

Time	0	2	4	6	24	48
Adrenochrome (micrograms/liter) ...	50	164	157	103	81	54

The height of the adrenochrome levels at 2 to 4 hours after administration of LSD-25 coincides well with the height in intensity of the clinical response. Perceptual distortions are maximal during this period. Adrenochrome levels are normal after 48 hours.

The threefold increase in adrenochrome levels from normal values (8) in plasma using an accurate biochemical assay (9) as

well as the evidence for the psychotomimetic effects of adrenochrome (10) and adrenolutin (11) strongly suggests that one of the basic mechanisms of LSD-25 activity is the production of adrenochrome which is one of the mediators of LSD-25 activity. Another is the increase in parasympathetic tone or acetylcholine activity (12) as in mechanism B. A comprehensive report will be submitted.

BIBLIOGRAPHY

1. Woolley, D. W., and Shaw, E.: *Proc. Nat. Acad. Sci.*, **40**: 228, 1954.
2. Thompson, R. H. S., Tickner, A., and Webster, G. R.: *Brit. J. Pharmacol.*, **10**: 61, 1955.
3. Hoagland, H., Rinkel, M., and Hyde, R. W.: *Arch. Neurol. and Psychiat.*, **73**: 100, 1955.
4. Liddell, D. W., and Weil-Malherbe, H.: *J. Neurol., Neurosurg. and Psychiat.*, **15**: 7, 1953.
5. Lingjaerde, P., and Skaug, O. E.: *J. Nerv. Ment. Dis.*, **124**: 578, 1956.
6. Heath, R. G., and Leach, B. E.: *Changing Concepts of Psychoanalytic Medicine*. Grune and Stratton, Inc., 1956.
7. Payza, N., and Hoffer, A.: To be published.
8. Hoffer, A., and Payza, N.: To be published.
9. Payza, N., and Mahon, M.: To be published.
10. Hoffer, A., Osmond, H., and Smythies, J.: *J. Ment. Sci.*, **100**: 29, 1954.
11. Hoffer, A.: *Hormones, Brain Function and Behaviour*. Ed. H. Hoagland, Academic Press, New York, 1957.
12. Hoffer, A., and Osmond, H.: *J. Nerv. Ment. Dis.*, **122**: 448, 1955.

HISTORICAL NOTES

THEODORIC ROMEYN BECK, M. D.

ERIC T. CARLSON, M. D.¹

As the name of Theodoric Romeyn Beck appears in each issue of the *American Journal of Psychiatry*, one may easily ascertain that he was the second editor of this venerable periodical. It seems therefore desirable to place him into perspective in the history of early American psychiatry.

Beck was born of English and Dutch ancestry in Schenectady, New York, on August 11, 1791, the eldest of 5 sons (1, 2, 3). Two of his brothers (John Brodhead and Lewis C.) also went into medicine and gained fame through their activities as professors at the College of Physicians and Surgeons and the Albany Medical College respectively. Theodoric received his grammar school education from his maternal grandfather before enrolling in Union College (Schenectady), from which he graduated in 1807. He immediately commenced his medical education as an apprentice to Drs. Low and McClelland in Albany, later shifting to the tutelage of Dr. David Hosack in New York City. His attendance at lectures at the newly founded College of Physicians and Surgeons in the City of New York led to the Doctor of Medicine degree at its first graduation in May 1811. His doctoral thesis, *On Insanity*(4), was published a year before Benjamin Rush's *Medical Inquiries and Observations Upon the Diseases of the Mind*. It is probable that Beck saw some psychiatric patients with Dr. Hosack at the New York Hospital and that herein lay the stimulus that would keep him on the borderlines of American psychiatry for the remainder of his life. This dissertation, based primarily on a survey of the literature, contains nothing original but does give an excellent condensed survey of the psychiatric thought of the day. Beck leans heavily on the Scotch philosophers, Reid and Stewart, for his basic psychology while Arnold, Chrichton, Pinel, and Rush all influence

his psychiatric thinking. He discusses history, diagnosis, causes, prognosis, treatment and results. His concluding brief mention of medical jurisprudence gives a clue to another of his interests and the one which would bring him the greatest notice and reputation.

He returned to Albany to begin his practice of medicine but other interests were soon making increasing inroads on his time and energy. After joining the Society for the Promotion of Useful Arts in 1812, his chairmanship of the committee on New York minerals lead him to lecture and write on this subject and to be the inspirational force behind a subsequent state geological survey. He recognized by 1814 that his wide scientific interests were conflicting with his desire to give time to his patients. However, 3 years later he gave up his practice when offered the position of principal of the Albany Academy, a post he held until 1848, only to become the president of the board of trustees. Those years were busy ones for Beck as he belonged to nearly 30 organizations and was active in many of these. His educational efforts were furthered by his appointment in 1841 as secretary of the New York Board of Regents wherein he not only influenced the educational policies of the state, but was instrumental in the growth of the New York State Library.

Although he had relinquished his practice of medicine to turn to diverse educational activities, he continued to contribute to his chosen profession in various ways. He taught through his appointments in 1815 as Professor of the Institute of Medicine and Lecturer on Medical Jurisprudence (later promoted to Professor in 1826) at the College of Physicians and Surgeons for the Western District at Fairfield, New York. He transferred from the first post to that of *Materia Medica* in 1836 and when the college finally closed in 1840, took the same position at the Albany Medical College until he was made Emeritus Professor in 1854. He was

¹ From the New York Hospital and the Department of Psychiatry, Cornell University Medical College, New York.

ive in the Medical Society of the State of New York, serving both on committees and consecutive terms as president starting in 1820.

Beck was to achieve his greatest fame in the field of medical jurisprudence. As he was planning a book on this topic as early as 1813, he gathered material over the years, finally writing much of the text at the bedside of his slowly dying wife to whom he was very devoted. Her death and the publication of the *Elements of Medical Jurisprudence* both occurred in 1823(5). His two-volume opus, which included a chapter on mental alienation, soon became a standard work. He lived to see it go through 10 editions; 4 in the United States, 4 in England and one each in Germany and Sweden. It continued in publication after his death with 2 more editions appearing in the next 10 years.

One can find a constant thread of involvement with psychiatry throughout his life, from his graduation thesis through a chapter in his work on medical jurisprudence followed by a review article in 1828 on "The Statistical Notices of Some of the Lunatic Asylums in the United States"(6). This background led to his increased participation in American psychiatry through his appointment in April 1842 to the board of managers of the then still unbuilt New York State Lunatic Asylum at Utica, a position he would continue to hold until his death. The board first offered the position of superintendent to Samuel B. Woodward, after whose refusal Amariah Brigham was appointed. Brigham and Beck must have developed a close relationship because Brigham had shared his plans to establish the *American Journal of Insanity* only with Beck and Pliny Earle(7). Beck encouraged Brigham in this enterprise and contributed translations of French articles, book reviews and reviews of annual hospital reports but essentially nothing original. Brigham in his failing health had suggested that Pliny Earle assume the editorship, but nothing came of it and with Brigham's death, the board of managers took over the responsibility of publishing the *JOURNAL*. They selected Beck as editor. He accepted with reluctance and with the hope that he would soon be relieved of what he considered to be a temporary appointment.

However he continued as editor for 4 years when he finally resigned under the pressure of advancing years, failing health and other responsibilities(8). His interim editorship was without any change in policy or any significant new contributions, but he did serve to keep the *JOURNAL* alive and its next editor, John P. Gray, was to have a profound influence on American psychiatry for the next 30 years.

Beck's contributions to the diverse fields of education, medical jurisprudence and psychiatry had been made possible by an excellent intelligence, a far roaming curiosity associated with a retentive memory and great energy, coupled with a need never to waste a moment, so that his day was systematically and inalterably organized. To strangers he often appeared reserved and unsocial, but his friends knew him as unrestrained and affable with a rich humor. He was modest, liberal and with a high sense of integrity and independence. He was paternalistic to his parents and brothers, all of whom he outlived. He was a big man (weighing about 210 lbs.) but progressively lost weight after February 1855 under the stress of an illness which puzzled his attending doctors, and which reduced him to an almost unrecognizable shell of his former self before he died on November 19 at the age of 64. So died a man who played a tangential role, but who nevertheless, left his mark on the history of early American psychiatry.

BIBLIOGRAPHY

1. Hamilton, Frank H.: *in* Samuel D. Gross *Lives of Eminent American Physicians and Surgeons of the Nineteenth Century*. Philadelphia: Lindsay & Blakiston, 1861. p. 776.
2. Van Deussen, Edwin.: *New York J. Med.*, 16:9, 1856.
3. Hamilton, Frank H.: *Eulogy on the Life and Character of Theodorice Romeyn Beck, M.D., LL.D.* Albany, New York: C. Van Benthuysen, 1856.
4. Beck, Theodorice R.: *An Inaugural Dissertation on Insanity*. New York: J. Seymour, 1811.
5. ——— *Elements of Medical Jurisprudence*. Albany, N. Y.: Websters & Skinners, 1823.
6. ——— *New York Med. & Physicians J.*, 7: 251, 1828.
7. Carlson, Eric T.: *Am. J. Psychiat.*, 112: 831, 1956.
8. Beck, Theodorice R.: *Am. J. Insanity*, 10: 436, 1854.

CORRESPONDENCE

THE MENTAL HEALTH BOOK REVIEW INDEX, AN ANSWER TO DR. KAHN'S QUERY

Editor, THE AMERICAN JOURNAL OF PSYCHIATRY:

SIR: I am sure Dr. Eugen Kahn was not proposing censorship when he wrote in the JOURNAL ("Information Values," October 1957): "What a blessing it would be if the publication of books which are neither bona fide literary works nor scientific treatises were stopped!" But the JOURNAL is widely read as the representative voice of psychiatry, and such a statement, even if meant facetiously, can easily convey to the general public that psychiatrists want to interfere with freedom of expression when it hurts them.

Censorship is not the method, in science, of weeding out unconfirmed observations and baseless opinions. The scientific community relies on the conscience of its investigators to uphold standards for published material (as Dr. Kahn intimates), on its journal editors to require high standards of keen observation, logical reasoning and fair judgment in contributions, and on the evaluation of discerning minds among all scientists and practitioners to recognize worthwhile contributions. There is a competition of ideas, the scientific community sitting as judge.

The system of book reviewing in the journals traditionally has been an opportunity for books to be evaluated authoritatively, without bias or parochialism, so that poor ones would not have a chance, and the influence of publishers and book dealers put in its place. Several judgments by specialists are necessary for a book to be reviewed. The editor must decide a book warrants review and select an appropriate reviewer, who then decides once more if the book merits review.

Hundreds of psychiatrists are actually busy doing what Dr. Kahn is asking for. The *American Journal of Psychiatry* reviews 100 to 120 books each year; add the

similar efforts made in numerous other psychiatric journals in this country and abroad. The difficulty is that the total result is not put in evidence and even subscribers to a large number of psychiatric journals can hardly form a picture of the books most widely and favorably reviewed and the insignificant place taken by the books judged as poor—so that the trouble which bothers Dr. Kahn is taken care of without censorship or interference at the source.

Fortunately, there is now a publication which performs such a service for the major journals in the field of mental health in the English language. The *Mental Health Book Review Index*, now in its third year, semiannually lists references to signed reviews of new books in this field which appeared in three or more of 72 journals in the mental health disciplines (psychiatry, psychoanalysis, etc.). (The listing is intended for the purpose of orientation only, but nevertheless provides the only extant *operational* delimiting of books in the literature of the mental health disciplines.)

Since the names of reviewers are given with each reference, a psychiatrist can easily expand his assessment of a book by a study of all the reviews listed, from three to twenty in some instances, and can then speak with the authority of the profession. The *Index*, through the efforts of a group of librarians, holds up a mirror to what the specialist-reviewers are doing already, and makes it easier for all psychiatrists to benefit from the evaluations of their selected colleagues. (The *Index* costs \$1 a year from M. E. Tresselt, New York University, New York 3, N. Y.)

In this constructive way, inferior publications are taken care of—by deserved neglect.

LOUIS PAUL, M. D.,
Beverly Hills, Cal.

REPLY TO THE FOREGOING

Editor, THE AMERICAN JOURNAL OF PSYCHIATRY:

SIR: Thanking you for sending me the "Answer" to my "Query" which Dr. Louis Paul has submitted to you, I wonder: Does this answer come from the *Mental Health Book Review Index* or does it come from Dr. Louis Paul?

The writer seems to agree with me which

is unmistakably expressed in the phrase "to filter out the worthwhile contributions from the stream of print."

Would it be possible to ask the writer to cut his remarks short? I deem it superfluous to increase the stream of print in this manner.

EUGEN KAHN, M. D.,
Baylor University,
Houston, Tex.

OSCAR WILDE

Editor, THE AMERICAN JOURNAL OF PSYCHIATRY:

SIR: In your August issue, Dr. Hoffer ventilated the hypothesis—so frequently quoted—that Oscar Wilde was a syphilitic. If by that term it is implied that a luetic infection had been contracted early in adult life, then one can but agree that the contention is by no means unlikely. At the same time one must admit that the evidence for such a view is most meagre, and it mainly stems from Paul Wiegler's *Genius in Love and Death*. (1929.)

But if Dr. Hoffer's thesis is that Wilde succumbed to a cerebral syphilis, then the evidence becomes even more sketchy. I know of no real historical support for the statement that . . . "the doctor who attended him in his last days stated that his patient displayed all the symptoms of a chronic syphilitic."

A scrutiny of the available information surrounding Wilde's last illness brings to light an intractable rash; giddiness; persistent headaches; one-sided deafness; an otological operation of some sort; and a brief terminal state of coma. Wilde's own ideas as to the nature of his malady oscillated between mussel poisoning, gout, and neurasthenia. It was the notorious Frank Harris who hinted at a "dreadful disease" aggravated by over indulgence in wine and spirits; but what Frank Harris writes never is and never has been acceptable evidence.

If Dr. Hoffer implies that Oscar Wilde's fatal illness was in the nature of a general paresis then he is on insecure grounds. Wilde always was deficient in an apt sense of occasion, and his "woeful judgement" was a life-

long trait—or at least one which he was liable to display ever since his undergraduate days. The conclusion that he deteriorated in his personality in his last years is ineluctable; but there is no hint of dementia in his correspondence, whether it be judged by its content or by the penmanship. Wilde's letter penned to Robert Ross not long before his death was to the effect. . . . "I am very ill, and the doctor is making all kinds of experiments. My throat is like a lime kiln, my brain a furnace and my nerves a coil of angry adders." Clearly Wilde had not lost his mastery over the Queen's English. . . .

No; we must admit that the nature of Wilde's last illness is still a matter of guesswork. He *might* have been infected with a venereal disease in his youth; he *might* possibly have developed a meningo-vascular cerebral syphilis or a luetic hydrocephalus. But that he was a victim of dementia paralytica is a most insecure contention (see Critchley, *Medical History*, 1: No. 3, July 1957).

There are other diagnostic possibilities too . . . carcinomatosis, hepatic cirrhosis, hypertension. Even more plausible is the suspicion of intracranial complication of a chronic suppurative otitis media. (See T. Cawthorne, *King's College Hospital Gazette*, 1955, 34, 251-263).

Dr. Hoffer and I would doubtless agree that had penicillin been available to the medical profession in 1900, Oscar Wilde's life might have been saved.

MACDONALD CRITCHLEY, M. D.,
National Hospital,
Queen Square,
London, W.C.1, England.

REPLY TO THE FOREGOING

Editor, THE AMERICAN JOURNAL OF PSYCHIATRY:

SIR: While I must agree with Dr. MacDonald Critchley regarding organic causes of death of Mr. Wilde, this was not the point of my recent letter to you. I was referring to the possibility that Wilde's homosexuality may have had some relationship to a chronic syphilitic process. I was not particularly interested in the causes of his death and certainly they may have been as Dr. Critchley suggested. The statement attributed to his doctor was taken directly from H. Montgomery Hyde's book *The*

Three Trials of Oscar Wilde. It ought not to be too difficult to determine whether or not his doctor made this particular statement.

I agree with Dr. Critchley that had Mr. Wilde had access to penicillin, his death may have been quite different, and I also suggest the possibility that his life and the development of homosexuality may have also been different.

A. HOFFER, M. D.,

Director, Psychiatric Research,
University Hospital,
Saskatoon, Sask.

IDEA AND ACT

Editor, THE AMERICAN JOURNAL OF PSYCHIATRY:

SIR: In the October 1957 number of the JOURNAL an editorial on page 374, "Idea and Act" might justify some questions.

The author of the article complains of having difficulties in grasping the argument of the Supreme Court (excepting dissenting Justice Clark's) on the basis of which the sentence of 14 men, convicted under the Smith Act was set aside. The interpretation of the Smith Act was "an extraordinary feat of psychological acrobatics," he feels. "This feat consisted of a gossamer-fine distinction between 'advocacy of abstract doctrine' and 'advocacy directed at promoting unlawful action.' According to this dialectic, 'teaching of forcible overthrow as an abstract principle, divorced from any effort to instigate action to that end' is quite permissible, and presumably the High Court is prepared to defend such teaching."

The implication of the article seems to be that the Justices are either ignoramuses (the author recites to the reader what he (the author) learned in college about the relationship between thought and action) or old fools or, considering the author's choice of words ("extraordinary feat of psychological acrobatics"), that they may have had some sort of ulterior motive. (Perhaps communist inspired?)

Whatever the case may be it would suggest a sad state of affairs.

There is, of course, an alternative possibility, namely, that the author of the article really has not grasped the psychological distinctions that the Justices have made and the

important issues that may hinge on such distinctions. For instance, it has been suggested lately that the coarseness of the distinctions made in the heydays of the late Senator McCarthy may have seriously retarded our research and defense program, and thus contributed to the melancholy sight of the sputnik. It is also possible that the acuity of such distinctions and the seriousness with which they are probed by discriminatory minds may help to decide the degree of freedom or regimentation of thought and speech for future generations.

Regardless of differences of opinions concerning the decision of the Supreme Court, it would seem incumbent upon the leading organ of American psychiatry, when it feels itself called upon to comment upon the events of the nation, that show that it is capable of distinguishing between issues that can be given a frivolous toss and those that should be handled with circumspection in accord with their portentousness. Furthermore, in cases of controversial matters of any significance, one would expect that editorial comments should reflect editorial deliberations and not be a one man's "show."

NIELS L. ANTHONISEN, M. D.,

Chief, Neuropsychiatric Service,
V.A. Center,

White River Junction, Vt.

(Ed. Note: Editorial comments in the JOURNAL derive from three sources: guest comments are signed in full; comments by associate editors are signed by initials; for unsigned comments the editor is responsible.)

COMMENT

EQUUS ET MACHINA

During the last thirty years Horsely Gantt of Johns Hopkins and Howard Liddell of Cornell have made a great contribution to American psychiatry by studying the behavior of animals in the Pavlovian tradition, and especially by correcting, expanding and re-interpreting Pavlov's findings. A recent monograph by Liddell¹ gives us a survey of this work and points out the many significant relationships to medicine and psychiatry. The book has much to do with conditioned reflexes and, therefore, with an important aspect of training and learning. One chapter is on the training of horses. This raises, in anyone who lived in this world before 1900, a poignant nostalgia; not just the general senile longing for the "good old days," but the realization of a specific loss.

Before the beginning of this century man had for thousands of years been intimately associated with horses. They were his chief means of transportation. Whether one were "horsey" or not, he had to be interested in them because they took him to the depot and back, ploughed his fields and helped to teach his children how to be gentle, patient and understanding of moods and feelings. Horses certainly gave to man a great experience in training, control and self-control.

There was, of course, that short and shameful interlude in our West, known as the Cowboy Epoch, when brutal men beat their broncos into quick submission and thereby developed beautiful buckers. But that is all passed and only remains in our cinema sadisms in which we still are expected

to admire the tough guys who, too cowardly to use their fists, shot each other because of anxiety and whiskey.

The close association of children with animals used to be almost universal. It taught them much about instincts, gave a respect for emotions and emphasized the necessity of keeping one's eyes and ears open. Sexual behavior was learned as part of the general behavior of all mammals and birds. No observant children could believe that masturbation, homosexuality or polygamy was wholly "unnatural" or entirely "immoral" no matter how much the parents tried to drum bookish morals into them.

Although parental and sibling relationships were certainly as important then as now, association with animals added a valuable experience. When a child had a puppy, colt or kid to handle, he soon learned that an affectionate relationship was essential, and that one cannot hurry training without disastrous results on future behavior. Translated into Liddell's terms, this means that the social environment must be controlled, emotions must be considered and that conditioned reflexes are formed best at an optimum speed. If too slow, they are lost, forgotten; if too fast, they cause behavior that can well be compared to the neuroses of man.

In a machine age there is no substitute for this experience with horses. Some wealthy persons may raise them for sport; other animals may be cultivated as pets; but the horse as a part of our culture is gone. We shall have to make up for the loss by a better psychological understanding of learning and discipline.

S. C.

¹ Liddell, H. S.: *Emotional Hazards in Animals and Man*. Springfield, Ill.: Charles C Thomas, 1956.

PRESIDENT'S PAGE

An extremely unpleasant responsibility of the President of The American Psychiatric Association is to announce the resignation of Dr. Daniel Blain as Medical Director, to take effect on September 1, 1958. Dr. Blain presented his resignation to the Council at its November meeting. The Council accepted the resignation with great regret. The general feeling was expressed that the Association owes such a deep debt of gratitude to Dr. Blain that it could not pressure him to remain when it was his desire to be freed of many of the responsibilities that the job required.

This is not the time nor place to give an account of the contributions that he has made to our organization. However, it may be pertinent to mention the rapid growth of the organization in these last 10 years. The number of members and fellows has more than doubled; the activities have extended into many areas. There have been developed new services, great extension of committee activities and a marked increase in the personnel serving the Association. For example, there are now some 50 committees and boards working on various aspects of mental health programs. There are a number of projects being supported by grants both from the National Institute of Mental Health and Foundations. There are other activities such as the Mental Hospital Institute and publication of books and pamphlets that are self-supporting. There are others such as the Central Inspection Board which have needed support in part from the Association and in part from grants.

What I am trying to indicate is that the Association is entering the area of big busi-

ness enterprise at a cost of close to a million dollars a year. This quite rapid addition of activity and responsibility has required a great deal of planning and much executive and administrative organization. The officers, the Council and its Executive Committee, as well as certain other committees such as the Long Term Planning Commission have devoted much time and thought to the affairs of the Association. During this period of growth and development your Medical Director has had to chart a course to direct many of the activities and to find means of financing them. This he has done exceptionally well.

I take this opportunity to call to your attention that greater and greater pressures are being put upon your officers, Council and Executive Committee, as well as other committees. It appears that the period of expansion will continue for sometime. Undoubtedly provision will have to be made to lighten some of the burdens of the officers. With the development of divisional and research meetings, with the activities of the branch societies, the presence of the officers is in demand. Such invitations are highly flattering, and certainly to your current President it is a great pleasure and delight to attend. However, projecting in the future, it becomes apparent that future Presidents will not be able to accept but a fraction of the invitations. Therefore there have been created offices for two Vice-Presidents, and the first election for these Vice-Presidents will take place this year. They undoubtedly will be of great assistance to the future Presidents and serve an important function for the Association.

HARRY C. SOLOMON

OFFICIAL NOTICE

RESOLUTION ON RELATIONS OF MEDICINE AND PSYCHOLOGY *

Approved by the Board of Trustees of the American Medical Association, The Council of The American Psychiatric Association, and the Executive Council of the American Psychoanalytic Association.

For centuries the Western world has placed on the medical profession responsibility for the diagnosis and treatment of illness. Medical practice acts have been designed to protect the public from unqualified practitioners and to define the special responsibilities assumed by those who practice the healing art, for much harm may be done by unqualified persons, however good their intentions may be. To do justice to the patient requires the capacity to make a diagnosis and to prescribe appropriate treatment. Diagnosis often requires the ability to compare and contrast various diseases and disorders that have similar symptoms but different causes. Diagnosis is a continuing process, for the character of the illness changes with its treatment or with the passage of time, and that treatment which is appropriate may change accordingly.

Recognized medical training today involves, as a minimum, graduation from an approved medical school and internship in a hospital. Most physicians today receive additional medical training, and specialization requires still further training.

Psychiatry is the medical specialty concerned with illness that has chiefly mental symptoms. The psychiatrist is also concerned with mental causes of physical illness, for we have come to recognize that physical symptoms may have mental causes just as mental symptoms may have physical causes. The psychiatrist, with or without consultation with other physicians, must select from the many different methods of treatment at

his disposal those methods that he considers appropriate to the particular patient. His treatment may be medicinal or surgical, physical (as electroshock) or psychological. The systematic application of the methods of psychological medicine to the treatment of illness, particularly as these methods involve gaining an understanding of the emotional state of the patient and aiding him to understand himself, is called psychotherapy. This special form of medical treatment may be highly developed, but it remains simply one of the possible methods of treatment to be selected for use according to medical criteria for use when it is indicated. Psychotherapy is a form of medical treatment and does not form the basis for a separate profession.

Other professional groups such as psychologists, teachers, ministers, lawyers, social workers, and vocational counselors, of course, use psychological understanding in carrying out their professional functions. Members of these professional groups are not thereby practicing medicine. The application of psychological methods to the treatment of illness is a medical function. Any physician may utilize the skills of others in his professional work, but he remains responsible, legally and morally, for the diagnosis and for the treatment of his patient.

The medical profession fully endorses the appropriate utilization of the skills of psychologists, social workers, and other professional personnel in contributing roles in settings directly supervised by physicians. It further recognizes that these professions are entirely independent and autonomous when medical questions are not involved; but when members of these professions contribute to the diagnosis and treatment of illness, their professional contributions must be coordinated under medical responsibility.

* This Resolution has been previously published in the official journals of the three named Associations. It was also distributed in the APA Mail Branch in October 1964. It is redistributed at this time (December, 1967) at the direction of the Council of The American Psychiatric Association.

NEWS AND NOTES

NEURO-PSYCHOPHARMACOLOGY.—Investigators from 13 countries founded an International Collegium for Neuro-Psychopharmacology in Zurich on September 3, 1957, during the Second International Congress for Psychiatry, with the purpose of promoting research and collaboration in the experimental and clinical fields. Work in these areas has produced remarkable changes in current neuro-psychiatric therapy, and particular attention will be given to the social implications. It is planned to organize special symposia and general meetings on the subjects of methodology and analysis of the pharmacologic and therapeutic results with psychotropic drugs under normal and pathologic conditions.

Professor E. Rothlin (Switzerland) was elected president with the executive committee consisting of Prof. E. Trabucchi (Italy), first vice-president; Dr. H. C. B. Denber (U.S.A.) and Dr. C. Radouco-Thomas (Switzerland), secretaries; Dr. W. A. Stoll (Switzerland), treasurer; Dr. P. Deniker (France) and Dr. P. Bradley (Great Britain), first councillors.

The next international meeting will be held in Rome September 9-12, 1958. Those interested in presenting papers are requested to send 250-word abstracts to Dr. Herman C. B. Denber, secretary, Manhattan State Hospital, Ward's Island, New York 35, N. Y., not later than March 1, 1958.

DR. MEYER'S PUPILS AND COLLEAGUES CONTRIBUTE TO BURGHÖLZLI LIBRARY.

Dr. Wendell Muncie reports that in connection with the memorial service and the placing of the plaque dedicated to Dr. Meyer at the Burghölzli Hospital in Zurich this summer, 17 pupils and colleagues of Dr. Meyer responded to the committee's suggestion and sent 31 copies of books authored by them for the Burghölzli Library. In addition, there were copies of the recently published *Psychobiology* (Dr. Meyer's Salmon Lectures), and his *Collected Papers* in 4 volumes. One author, not having any copy

of his own book, sent the Library a first edition of Benjamin Rush's text book.

Dr. Bleuler expressed his gratitude for these contributions to the Library.

REPORT OF THE NOMINATING COMMITTEE.—The nominating committee (Henry W. Brosin, chairman) presents the following list of candidates for election as officers of the A.P.A. for the year 1958-59:

President-elect, William Malamud, Boston, Mass.; Vice-president, David C. Wilson, Charlottesville, Va.; Vice-president, William B. Terhune, New Canaan, Conn.; Secretary, C. H. Hardin Branch, Salt Lake City, Utah; Treasurer, Robert H. Felix, Bethesda, Md.; Councillors (3 to be elected from 5 nominees), Dana Farnsworth, Cambridge, Mass., Lawrence Kolb, Jr., New York, N. Y., Robert T. Morse, Washington, D. C., Alexander Simon, San Francisco, Cal., George Tarjan, Pomona, Cal.

ALFRED P. SLOAN VISITING PROFESSORSHIP.—Dr. Karl Menninger has announced the appointment of Richard M. Hewitt, M. D., director of the Mayo Clinic's Section of Publications for 15 years, as the third Alfred P. Sloan Visiting Professor at The Menninger Foundation.

The visiting professorships were established at the Foundation by a grant from the Alfred P. Sloan Foundation with the purpose of enriching the professional education of physicians studying in the Menninger School of Psychiatry. Doctor Hewitt will concentrate on helping resident physicians develop skill in communication.

Doctor Hewitt was director of publications at the Mayo Clinic until 1949 and has since served as the Clinic's senior publications consultant and also as associate professor in the Mayo Foundation Graduate School of the University of Minnesota.

BROOKLYN PSYCHIATRIC SOCIETY.—The spring meetings of the Brooklyn Psychiatric Society will be held at the Brooklyn State

Hospital, 681 Clarkson Ave., Brooklyn, N. Y., on January 16, February 20 and March 20, 1958.

The subjects of the scientific sessions which are to be held at 8:30 p.m. in the auditorium are as follows: "A Comprehensive View of the Phobias" by Nathaniel Ross, M.D.; "Investigations on Animals and Man in Relationship to a Chemical Origin of Schizophrenia" by Harold A. Abramson, M.D.; and "The Psychology of Thought Control" by Joost A. Meerloo, M.D.

For further information address: Abbott A. Lippman, M.D., sec.-treas., 929 Albermarle Road, Brooklyn 18, N. Y.

AMERICAN ORTHOPSYCHIATRIC ASSOCIATION, INC.—The Association will hold its 35th annual meeting at the Commodore and Roosevelt Hotels in New York City on March 6, 7, 8, 1958.

The Combined Book Exhibit in 1958 will be located in the foyer of the Grand Ballroom of the Commodore Hotel. It will be well staffed throughout the meeting.

In preparing your list of publications for this exhibit please keep in mind the fields of professional interest of those attending: psychiatry, psychology, social work, sociology, anthropology, education, nursing, pediatrics and public health.

The Association will be meeting jointly with the American Academy of Child Psychiatry, the American Association of Psychiatric Clinics for Children and the Mental Health Section of the American Health Association.

For information address Marion F. Langer, Ph.D., Executive Secretary, 1790 Broadway, New York 10, N. Y.

ADLER MEMORIAL ISSUE OF JOURNAL OF INDIVIDUAL PSYCHOLOGY.—The November 1957 issue of this Journal, published semi-annually by the American Society of Adlerian Psychology, Inc., celebrates the twentieth anniversary of the death of Alfred Adler. A lead article by Robert W. White discusses "Adler and the Future of Ego Psychology," and is followed by contribu-

tions from Gardner Murphy, Rudolf Dreikurs, and others.

The *Journal of Individual Psychology* is edited by H. L. Ansbacher, University of Vermont, Burlington, Vt.

OPENING OF THE ONTARIO HOSPITAL, NORTH BAY.—The 18th mental hospital, operated by the Mental Health Division of the Ontario Department of Health, was opened on October 15, 1957, at North Bay, Ontario. The City of North Bay is known as the "Gateway to the North," and the hospital will serve the area lying east and north-east of Lake Superior. This area, which is a mining and lumbering area, has a population of almost 400,000 persons, and was formerly served by hospitals in the southern part of the Province.

The hospital units already constructed will house about 750 patients. The addition of two 150-bed pavilions, and a 250-bed medical and surgical building, will bring the total capacity to about 1,300 beds.

A nucleus of experienced staff has been recruited from other mental hospitals, and under the direction of the Superintendent, Dr. W. H. Weber, formerly Assistant Superintendent of the Ontario Hospital, Hamilton, is engaged in training new staff recruited from the area.

When the level of professional staff will permit, an out-patient service and travelling clinic will be established to serve the north-eastern part of the Province which, up to the present, has had no local service except in Sudbury.

Correction.—In the article on Physiological Treatment by Dr. Joseph Wortis in the annual Review of Progress, in the January 1958 issue of the JOURNAL, the second column 7 lines from the bottom on page 603 reads "36% of leukopenia. . . ." The line should begin ".36% of leukopenia. . . ."

Also, the danger of retinitis pigmentosa referred to by Malitz and Hoch was found with piperidinochlorphenothiazin (NP 207) and not with prochlorperazine (Compazine).

BOOK REVIEWS

THE SEXUAL CRIMINAL. A Psychoanalytic Study (2nd Ed.). By *J. Paul de River, M.D.* (Springfield, Ill.: Charles C Thomas, 1956, 400 pp. 84 ill. \$6.50.)

Sex crimes are a challenge to the psychiatrist. This is a field where psychiatrists could contribute a great deal to the understanding, handling and prevention of human acts that plague society. The present book, however, is not a help; it is a road-block.

It is composed of 4 parts. The first 2 consist in case histories of sadism and masochism. The third treats the psychological aspects of crime investigation. The fourth, "A Study in Crime," is made up of contributions by a prison physician, a judge, a lawyer, a police official, a district attorney and a crime writer. The book is excellently gotten out, on beautiful paper, by a well-known medical publisher, and has a full index. This is its second edition. It is intended for the layman and the professional man.

The author pleads for a "sexual psychiatry." No clear distinction is made between sexual perversions and violent sex crimes. One contributor to the last part of the book makes the falsely alarming statement that "every sexual criminal is a potential murderer." There is an introduction by a prosecuting attorney which is really a brief for the prosecution directed against the "sex pervert," who "should be regarded not as a patient but as a criminal." Homosexuals are called "degenerate(s)" and regarded as "inveterate seducer(s)." Most sex perverts are called "inferiors . . . in personality and character."

There is no evidence of scientific, clinical or psychoanalytic reasoning. A good part of the case histories is long, sometimes banal dialogue between examiner and culprit. To the normal layman this book is apt to bring confusion. For instance, it quotes from a paper this statement: "When a mother flings her arms around an infant and hugs it, there is plainly visible an intense desire of violence." For the abnormally susceptible layman the book will cause stimulation.

There are quite a few illustrations. They are largely gruesome horror pictures of unfortunate victims. They are sensational, unenlightening, and out of place outside a police crime laboratory.

Why the book is called "a psychoanalytic study" is hard to see. An "11 year old female sadist" is described as "showing the prevalent Electra, Cain and destruction complexes." Among other misleading statements is this, that "full lips and dreamy eyes (are) characteristic of the sexual criminal." The author's attitude is indicated by this sentence: "Let us remember that although there may be other psychiatrists called into the case by the defense and appointed by the court, it is the police psychiatrist who really gets the true picture." If an accused per-

son shows resistance to the injection of drugs for investigation, it "demonstrates his guilt and such a reaction and resistance is indicative of his guilt."

Of homosexuals, both male and female, the author says: "Most of them are egotists, living under the idea that they can improve upon the laws of God and man." For homosexuality "electric shock therapy" is listed as one of the treatments offering "the best and most lasting results."

The contribution by the police officer has 2 case histories, more sensational than instructive. One refers to the "sex orgies" of a foreign diplomat and the other deals with an investigation that "travelled into high circles of government."

Ellery E. Cuff, public defender of Los Angeles County, contributes a brief statement justly criticizing some of the so-called "sexual psychopath" laws, according to which a man who has not committed a sexual offense may be committed for life as a "potential sex offender."

The author has contributed summaries and a glossary. Examples: "The conscious mind has no part in thought. Thinking is the function of the subconscious." "Conscious mind . . . its function is the state of awareness or consciousness." "Hysteria: a psychosomatic disorder characterized by violent symptoms of emotionalism with states of anxiety. . . ." "Unconscious mind . . . the seat of innate intelligence."

Dr. Manfred S. Guttmacher, who has done clinical research on sex criminals, wrote of the first edition of this book (*Am. J. Psychiat.* Dec. 1953, p. 477): "De River's book on the sexual criminal (is) a piece of charlatanry with special appeal to sado-masochists." This second edition would not change his opinion. The question might even be legitimately raised, in view of the illustrations and the form of the case histories, whether this is not a pornographic book. I have no doubt at all of how Kraepelin, Bleuler, Freud and Adolf Meyer would have answered that.

FREDRIC WERTHAM, M.D.,
New York City.

EMOTIONAL HAZARDS IN ANIMALS AND MAN. By *Howard S. Liddell, Ph.D.* (Springfield, Ill.: Charles C Thomas, pp. 97, 1956.)

This compact, interesting monograph, the first in a series of American Lectures in Objective Psychiatry, is a condensation of the author's 3 decades of experience in animal behavioral research. Starting from his intensive work with sheep and goats, several principles of behavior are evolved which are of practical and theoretical interest to psychiatry. The central one pertains to the stressfulness of self-imposed restraints, considered to be the basis for the development of emotionally disturbed behavior (experimental neurosis) in ani-

and presumably involved in human illness as well. In such situations, an organism is placed in a state of uncertainty, perhaps anxious, anticipation of what is to take place next, a serious threat to emotional control, while the capacity for responding in different ways has been restricted sharply. Experimental data are summarized which cogently illustrate this point. Settings such as these, translated into their human counterparts and controlled by the variables of loneliness, monotony, confusion or overstimulation, are suggested as important prior conditions for the development of emotionally disturbed behavior. For humans, the culture is restrictive, thereby setting the stage for the development of emotional illness. Phases in this development along with symptoms manifested are outlined and presented as comparable in a broad sense for both animal and man. This is illustrated by examples. The author suggests a means for the maintenance of mental health in face of restrictive features. This is envisaged in terms of the "creative impulse," by means of which man can be relatively free and still remain socialized.

There is much merit in the author's point of view, for he has attempted, and successfully, to point out ways of bridging the gap between the laboratory and the clinic. This is not to say that all mental illness derives from the factors he suggests, but there can be little question that he has arrived at fundamental principles which should be investigated more intensively with regard to their role in humans. Certainly, the ever present paradox of overstimulation in the direction of culturally interested goals in our society today looms large as a threat to the maintenance of mental health and can be shown to have comparable effects in laboratory animals as well.

Dr. Liddell's book is a fascinating blend of psychological, psychiatric and philosophical considerations pertaining to mental health from the standpoint of an experimentalist. It makes for enjoyable and stimulating reading, and is recommended highly.

LESTER H. GLIEDMAN, M.D.,
Johns Hopkins University.

MASKED EPILEPSY. By *Hugh R. E. Wallis, M.D.*
(Baltimore: Williams & Wilkins, 1956. \$2.50.)

Attention is focused on diagnostic problems of so-called cyclic vomiting, headache, abdominal pain, pyrexia, pain in other parts of the body, nightmares, sleep walking, day terrors, screaming attacks, temper tantrums, etc. Wallis in *Masked Epilepsy* gathers these problems into the fold of idiopathic epilepsy on the basis of six points: 1. paroxysmal nature of the attacks; 2. family history; 3. progress of the disease; 4. electroencephalographic findings; 5. response to treatment; 6. lack of other adequate explanation. He estimates that in 100 cases of masked epilepsy, 42 could be expected to give the family history of seizures, 58 a history of epilepsy or masked epilepsy and 85 an abnormal electroencephalogram. Although it has been pointed out that a number of normal people

show abnormal EEG, the story Wallis tells is that the "normal" people were selected only by the fact that they never had a convulsion and probably included a number of "normal" people.

The book may be criticized as a very sketchy job in which the 20 case histories are only highlighted, the EEGs not described (but merely stated as "normal," "outside normal limits," "immature for age," "definite epileptic feature," "no definite epileptic features," "some epileptic features," etc.) the criteria non-specific. We may disagree when he states that response to anticonvulsant treatment (phenobarbital) proves a case as epilepsy. Nevertheless the book serves a useful purpose in directing attention toward a diagnosis of epilepsy in these problem cases which may actually respond to anticonvulsant drugs. Many patients may thus be saved months and years of ineffective medical, surgical or psychiatric treatment.

ELIZABETH G. FRENCH, M.D.,
Boston, Mass.

MR. LYWARD'S ANSWER. By *Michael Burn.*
(London: Hamish Hamilton, 1956. 21 s.)

Michael Burn, a correspondent for the *Times* has written a sensitive and poetic account of Finchden Manor and its Director, G. A. Lyward. This is a residential school for disturbed children which was founded by its present director and provides a therapeutic community for what Alexander would call a corrective emotional experience. Mr. Lyward, a lay therapist, has been directing this school for the last 25 years. The current enrolment of the school is 40 adolescents; approximately 270 boys have been rehabilitated by this program. The author describes Lyward's uncanny understanding of these boys and how he and his staff of 6 offer warmth and understanding to these pre-psychotic youngsters. At times the boys and staff are described with such clarity that one can almost visualize the situation. The author spent many months as a member of the staff to secure the data and one can experience the nuances which the boys are experiencing.

The results obtained are remarkable. Of the 270 boys who have spent time at the school, 220 stayed for the minimal period of 6 months and a few remained as long as 6 years. It is estimated that 213 have been rehabilitated and are handling their anxiety in acceptable ways instead of participating in delinquent or psychotic patterns.

The serious defect in this volume is the absence of specific formulations and techniques in handling these adolescents. One would question the statistics given by the author, as he does not describe his follow-up study. One can overlook the defects as he writes, "I am no expert on psychiatry but a respectful tourist in their land." This is one of the few volumes that provides fascinating reading and attempts to enlighten the lay audience and the expert. It is recommended to all who work with adolescents.

LOUIS LUNSKY, M.D.,
Los Angeles, Cal.

THE CIBA COLLECTION OF MEDICAL ILLUSTRATIONS.
Vol. 1. Nervous System with a Supplement on the Hypothalamus. By *Frank H. Netter, M.D.* (Commissioned and published by CIBA Pharmaceutical Products, Inc., U. S. Headquarters: Summit, N. J., 1957. \$7.00.)

This volume is the first of a series (3 volumes have already been published) which when completed will cover "the major anatomy and pathology of all the systems comprising the human organism." The illustrations are in color and are in themselves beautiful works of art. We are reminded of the extraordinary drawings of Max Brödel of the early Hopkins days, pioneer medical illustrator in the United States. The excellence of the CIBA plates is the happy result, as Dr. Fulton says in his Foreword, "of artist and physician being combined in one person."

The illustrations are accompanied by descriptive texts by Doctors Kaplan, Kuntz and von Bonin, that are "comprehensive and yet masterpieces of conciseness."

The prefatory page by medical historian John F. Fulton is particularly useful in giving an outline history of medical illustration from the *Fabrica* of Vesalius onward. He notes that the plate of the vascular circle at the base of the brain included in Thomas Willis' *Cerebri Anatome* (1674) was designed by Christopher Wren. Fulton comments, "I have always suspected that it was Wren rather than Willis who discovered the arterial circle." He remarks further that Netter's portrayal of the Circle of Willis "is probably the clearest that one will find in any modern anatomical text." Also, in the plate of the lateral aspect of the brain, the position of the Island of Reil, often confusing to students, is clearly shown by the simple device of retracting the Fissure of Sylvius.

The material in this volume is divided into 5 sections: 1. anatomy of the spine; 2. the central nervous system; 3. functional neuro-anatomy; 4. the autonomic nervous system; 5. pathology of the brain and spinal cord. To the present third printing of Vol. I is added a supplement covering the hypothalamus, prepared in collaboration with Dr. Ingram, and which first appeared in the July-August 1956 number of the CIBA Clinical Symposia. This valuable section shows in lateral, frontal and horizontal planes the various hypothalamic relationships. Such functions as control of water excretion, regulation of water balance, of blood pressure and temperature, control of appetite, sleep-waking mechanisms, and those involved in certain emotional reactions are beautifully portrayed.

Altogether Volume I contains 122 full-color plates, and both the main portion and appendix are comprehensively indexed. There is also a brief biographical sketch of, and an introduction by, the artist.

The books in this series are offered by CIBA Pharmaceutical Products, Inc. as a non-profit service to the medical profession. They are sold at cost and can be obtained from any CIBA office or through book stores.

C. B. F.

THE CONQUEST OF LONELINESS. By *Eric P. Mosse*
(New York: Random House, Inc., 1957.)

Dr. Mosse has written an interesting and readable book on loneliness. In the first part of the book he discusses our civilization as conducive to producing more and more states of loneliness. Dr. Mosse has defined loneliness not as the disease of being alone, but that of fear of being alone, namely, isolated—cut off from human contact. He feels that many of the achievements of our civilization tend to isolate people from each other even though men appear to live more and more in close cooperation with each other. For this, of course, the term "lonely crowd" was coined. No comparative studies exist thus far as to how this isolation of individuals is really more prevalent in our culture. Retrograde falsifications are not uncommon in appraising past cultures. Isolation or the feeling of being isolated commonly occurs in certain mental disorders like schizophrenia. This occurs in every culture and individuals suffering from this disorder seemingly feel out of communication with their surroundings regardless of how the culture is organized. This would indicate that certain fears of loneliness or isolation are not due to environmental factors alone, but that the psychic organization of the person which tends to isolate him from any environment in which he lives also has to be considered.

Dr. Mosse is aware of the fact that loneliness is not a disease but a symptom which could be the sign of a social disorder, an individual disorder, or both. Again it is not specific to any one particular emotional disorder, but can occur in the framework of different psychiatric entities such as schizophrenia, depressions, neuroses, etc. The well-documented case histories in the book clearly indicate that loneliness as a symptom can occur in a number of clinical configurations. It is also clear that all treatment attempts have to be based on an individual appraisal of the patient to gain insight into the special dynamic constellation which is present. At times attempts have been made to relieve loneliness in persons with advice as to how to socialize. Attempts have even been made to expose such persons to social situations where it was assumed this would benefit them. These measures may help persons who are lonely, but they do not help people who are suffering from loneliness. Dr. Mosse clearly indicates that the sources, intricacies and reaction formations have to be taken into full consideration if we want to help these patients.

Dr. Mosse has written a well-organized and extremely readable book on a symptom which occurs in many psychiatric conditions and which creates a deal of suffering in individuals who are often highly intellectual, sensitive, but fearful of rejection. Loneliness is an important psychiatric symptom. Interestingly enough it has not been written up very often in the psychiatric literature. Dr. Mosse's book, therefore, fills a gap. It also conveys the message to many that a great deal of help can be given to persons suffering from loneliness.

P. H. H.

IN MEMORIAM

ROBERT FINLEY GAYLE, JR., M. D., 1891-1957

On November 4, 1957, death claimed Robert Finley Gayle, Jr., outstanding psychiatrist and neurologist, and past president of The American Psychiatric Association.

Born a Virginian, Dr. Gayle received his rudimentary education in Norfolk, Virginia, and his doctorate of medicine at the Medical College of Virginia. His training at the Neurological Institute in New York and the Orthopedic Hospital in Philadelphia, his services as a psychiatrist with the American Expeditionary Forces Third Division in France during World War I, and his exceedingly well-rounded program of experience in numerous hospital settings, qualified him for the offices and responsibilities he was later to assume in the realm of neurology and psychiatry.

The personality of Robert Finley Gayle, Jr., was fashioned in no small degree by four people. His mother, Mae Jeanette Young Gayle, contributed a cultured background, endowing him with a gracious manner and training in the social skills. His father, Robert Finley Gayle, a Methodist minister, passed on an interest in community affairs, a certain air of confidence, and political acumen. When Finley, as a medical student, was pressed for funds, it was Beverly Tucker, then professor of neurology at the Medical College of Virginia, who secured part-time work for him. They became friends, and it was through this association that Finley decided to enter the field of neurology. On return from war service, he formed a partnership with Dr. Tucker for the practice of psychiatry and neurology. Finley later became professor of neurology and psychiatry, and ultimately chairman of that department, at the Medical College of Virginia. During his earlier years of training and overseas experience, Colonel Zabriskie was one of the many persons who influenced his growth and remained a lifelong friend. Finley, however, was impressed most of all by his relationships with Dr.

Joseph Collins, a powerful individual. He often commented that he had learned to be arrogant from Joe Collins.

Finley is perhaps best remembered by his behavior when, in a controversy, he had to express a contrary point of view. His eyes would flash and his voice was sharp and crisp whenever he made a stand for what he felt to be right and just—as though he were leading a cavalry charge against the entrenched forces of wrong. Insofar as his war experiences along the Marne and at Belleau Woods were concerned, there was never any boasting—only the remark, "I was there."

He was a teacher, an organizer, an investigator, a successful therapist, and above all, an executive. This latter characteristic developed over the years, as he was chosen to many executive positions of prominence in the South, in the nation, and in the international scene. He is remembered in Virginia particularly for his service to the mentally ill. His work with the Hospital Board was recently commemorated by the opening of the R. Finley Gayle Treatment Center at the Southwestern State Hospital, Marion, Virginia. The peak of his career was marked by his outstanding record as President of The American Psychiatric Association. He had creative ability; yet, most of all, he preferred to see a job well done through his leadership, rather than to receive individual recognition for its completion.

To know Finley best was to know him in his home. He was happiest in his house in Richmond or his cottage on the York, with his children and grandchildren around him. He was a true patriarch, whose life was blessed first by Elizabeth Marshall Cole, and later Sarah Geer Dale, both splendid wives. He was well aware of this, and would often say to me, "We were lucky in choosing good women. Know how to pick them, don't we,

boy!" He was a greacious host and a visit to his home was an experience to cherish.

In the last analysis, Finley Gayle, was a personality, was unique. His natural display of fine manners, his infinite accumulation of skill in interpersonal relationships, his thoughtfulness and consideration of the feelings of others—never servile or falsely ingratiating—were innate and admirable. He was a man of definite opinions, which he did not hesitate to express. His acceptances were based on worth; he was also slow to change, though happy to enter into new ventures when convinced the move was right. His character, personality, and sound judgment surrounded him with an atmosphere of solidarity, manifested by feelings of security in those who sought his help—in those who studied under him—in all who knew him.

Dr. Gayle's lifetime was marked, too, by his contributions to the field of neurology and psychiatry, evidenced by his influence in Virginia and throughout the South, and his

many writings which have helped to advance study in this phase of medicine.

Dr. Gayle was an outstanding member of The American Psychiatric Association. When elected to the office of secretary, he became a devoted servant. Although physical illness caused him great pain, he continued to give of himself without limit and later, by the singular ability he demonstrated as President of the Association, he became more than an individual leader; his imprint on this century-old tradition will always be felt.

The American Psychiatric Association is most grateful for the life exemplified in Robert Finley Gayle, Jr., whose contributions and services have fashioned a richer, finer organization. He will live on in the hearts of its members, who, with all his acquaintances, will remember him as a loyal friend, a dynamic influence, and above all, a gentleman.

DAVID C. WILSON, M. D.

DEMOS

It is extremely curious how easy it is to get into a false position in the mind of the public. I'm not conscious of ever having sinned against the common people, yet I am said to be its enemy. To be sure, I am no friend of the revolutionary mob which is out for theft and murder and arson and the most vulgar personal profit in the name of the public weal. I am no friend of such people, but neither am I a friend of Louis XV's. I hate violent overthrow because it always involves the destruction of good, whatever be its gain. I hate those who bring it about and equally those who made it inevitable. Well, does that make me an enemy of the people?

—GOETHE

(to Eckermann, Apr. 27, 1825.)

EUGEN BLEULER'S CONCEPT OF THE GROUP OF SCHIZOPHRENIAS AT MID-CENTURY¹

FRITZ A. FREYHAN, M.D.²

It seems not only important but provocative to reexamine in 1957 what Eugen Bleuler established in 1912 as his concept of the group of schizophrenias. Although this major contribution to our knowledge on schizophrenia was published in 1912, an interval of 38 years passed before an English translation found its way into the hands of American psychiatrists. The common belief prevails, nevertheless, that his ideas were accepted decades ago; that his differentiation of primary and secondary symptoms paved the way toward a psychodynamic understanding of the schizophrenic patient and thereby contributed to the development of psychotherapeutic techniques which were yet to be discovered. This is not wholly true, I believe. There is evidence which suggests that the main psychopathological conception found approval and recognition while equally important views on clinical and theoretical aspects remained either unknown or were never assimilated. In my attempt to evaluate Bleuler's ideas in the light of contemporary concepts, I shall feel encouraged by his conviction: "Errors are the greatest obstacle to the progress of science; to correct such errors is of more practical value than to achieve new knowledge." The range and the content of psychiatry have been greatly extended in the first half of this century. It is well to remember, nevertheless, that unawareness of some cornerstones of Bleuler's concept of schizophrenia accounts for errors and detours on the road to scientific and therapeutic achievement.

If one turns to the developments of the recent past and present, one can easily sympathize with an impression of Manfred Bleuler who reviewed the changes in concepts in the study of schizophrenia in the years 1940-1950:

Thirty years ago, in spite of feintings and dreams, there was still a common understanding on the

basis of certain fundamental concepts which were shared by everyone. Today, the trend of scientific thought, the spheres of scientific interest and scientific nomenclature have grown so far apart and become so independent within the various schools of thought and countries that even acknowledged authorities on the subject are at times no longer able to communicate with each other.

We may wish to determine what are fundamentally divergent views which must exist side by side awaiting scientific confirmation or disproof and what, on the other hand, are variations of old themes or rediscoveries of facts well known to preceding generations. There is no sense in denying the naturalness of a generation-centered point of view. But scientific progress presupposes the ascertainment and recording of facts to ensure an organic, cumulative growth of knowledge. We need in psychiatry the cultivation of the historian's point of view which, in Toynbee's words, requires that "the historian arrives at his professional point of view by consciously and deliberately trying to shift his angle of vision away from the initial self-centered standpoint that is natural to him as a living creature." Peculiarly enough, the psychiatrist as scientist tends to live solely in the present but effectively turns historian when assuming the role of psychotherapist. There should be no reason why his sharpened perceptiveness of genesis could not contribute to his dynamic understanding of the scientific present as the continuation of the past.

The historian's sense of continuity is a prerequisite for a comprehensive understanding of Bleuler's concept of the schizophrenias. There is little about schizophrenic patients, about the nature of their being sick, their fate in life and about the therapeutic modifiability of their symptoms which escaped the observing and exploring mind of the man who not only worked but lived in psychiatric hospitals, devoting many years to very close associations with schizophrenic patients. What makes his book, *Dementia Praecox or the Group of Schizophrenias*, as Zilboorg reminds us "the classical work of twentieth century psychiatry," is not only

¹ Read at the 114th annual meeting of The American Psychiatric Association, Chicago, Ill., May 13-17, 1957.

² Assistant Professor of Psychiatry, University of Pennsylvania, Philadelphia, Pa.

the original conception of psychopathology, but the unparalleled scope of treatment which ranges from physiological to psychological theory, from social management to critical exploration of clinical therapies, from evaluation of epidemiological aspects to penetrating analyses of schizophrenic personalities.

If we now cast a glance back over the past 38 years, we can hardly escape the impression that a great deal of effort was spent on rediscovering what Bleuler had elaborated with compelling clarity. To begin with the all important definition of schizophrenia, he had stated:

By the term 'dementia praecox' or 'schizophrenia' we designate a *group of psychoses* [italics mine] whose course is at times chronic, at times marked by intermittent attacks, and which can stop or retrograde at any stage, but does not permit a full *restitutio ad integrum*. The disease is characterized by a specific type of alteration of thinking, feeling, and relation to the external world which appears nowhere else in this particular fashion.

Here is evident beyond controversy that Bleuler divorced not only the diagnosis from outcome, but stressed the variability of course and severity. His emphasis on range, variability and, most crucial, reversibility of schizophrenic manifestations, forms the cornerstone of his concept. To go no further than this, the perplexing fact remains that the notion of schizophrenia as a hopeless disease did not die. Notwithstanding statistical evidence of modes of recoverability, however defined—and it should not be forgotten that Kraepelin reported 17% social recoveries by the most modest of standards—newer approaches were time and again acclaimed because they bore the marks of optimism. At the 1950 conference at Yale on schizophrenia and psychotherapy, research from one of this country's foremost clinics was reported with this introduction:

This research began and developed in an atmosphere pervaded by a consistent spirit of optimism regarding the treatability of schizophrenia—a premise which has prevailed in this institution since its inception, even when it was the general opinion that a recovery in supposed schizophrenia disproved that diagnosis.

The author then acknowledges the support afforded him by the "scientific conviction" of his colleagues "that schizophrenia is by

no means a hopeless disease." It would certainly be unfair to single out this report as if its peculiar assertions were unique. But it conveys a common obsession: to propound a new therapeutic approach with a message of optimism. How can we serve the cause of scientific progress, we must honestly ask ourselves, if we feel compelled to advocate as new what amounts to mere repudiation of an anachronistic cliché?

We cannot ignore that Bleuler found it impossible to recognize any uniformity in the course of the disease:

One comes closest to reality if one makes it clear that merely the general direction of the course of this disease is toward a schizophrenic deterioration, but that in each individual case the disease may take a course which is both qualitatively and temporally rather irregular. Constant advances, halts, recrudescences, or remissions are possible at any time.

He left no doubt that "true arrests in the progress of the disease may appear at any time." His observations of the importance of external influences—which Kraepelin later confirmed—are highly modern in their practical significance:

Definitive or transitory improvements occur spontaneously, or in connection with psychic influences or factors such as transfer to another place, a release, a visitor. . . . These improvements occur significantly less frequently in the chronic conditions than in the acute, but are not completely absent from the former.

Accordingly, he insists that it is essential that external circumstances be changed:

If the patients are permitted to remain always in the same set of surroundings, they easily become more and more encased in their disease and proportionally less accessible.

Bleuler's lucid and highly practical ideas on evaluation anticipated some of the errors which were to cloud the validity of statistics concerned with modern therapies. Since he did not believe in a full *restitutio ad integrum*, he stated: "We do not speak of cure but of far-reaching improvements." Disputing the more optimistic reports of other authors who claimed cures, he expressed his doubt with the observation that he had never released a schizophrenic "in whom I could not still see distinct signs of the disease, indeed, there are very few in whom one would have to search for such

signs." Yet he added: "I know schizophrenics who, after their illness, have conducted and developed complicated business." To understand what Bleuler envisaged as far-reaching improvements, we must turn to his choice of criteria. These sound ominous if taken verbally since they are based on the "severity of the deterioration." But he explains "those capable of earning a living, I call cases of 'mild deterioration'; those completely incapable of social living are called 'severe deterioration'; the intermediary types who do not fit into either of these two categories are placed as medium deterioration." Obviously, what he modestly called "mild deterioration" corresponds to the social recoveries as used by others. His comments on the pitfalls of statistics will capture the respect, if not admiration, of our biometricians. Warning that "varying conditions of admission and release determine the average prognosis of the disease in that institution," he minimizes the value of reported results: "Any figures, then, will serve to estimate not schizophrenia as such, but the schizophrenics admitted to any given hospital."

I have always wondered why the following figures, referring to his group of 515 cases, admitted to the Burghoelzli hospital between 1898-1905, have found little, if any, comment: mild deteriorations, i.e., capable of earning a living, 60%; medium deterioration 18%, and severe deterioration 22%. Bleuler cautioned: "Naturally, these results get considerably worse with time. Yet, few of those with a good remission have had to be returned to the hospital for permanent commitment because of a later exacerbation of the disease." Results such as these are remarkable even by modern standards. It does not matter whether his cases were milder, his criteria for improvement more liberal or the tolerance of Swiss communities toward patients more pronounced than elsewhere. Nor do we need to be concerned with factors of a statistical nature. However, we cannot escape the question whether his conviction, that it be "preferable to treat these patients under their usual conditions and within their habitual surroundings" did not stem from a profound realization of elective potentialities as well as therapeutic limitations. By expecting less, he apparently

achieved more. Instead of nursing ideal concepts on cure, he concentrated on implementing practices of social adaptation. This naturalistic attitude met the resistance of those who adhered to a more puristic concept of cure. At the symposium "Schizophrenia: an investigation of the most recent advances," held under the auspices of the Association for Research in Nervous and Mental Diseases in 1929, the ever-present controversy between naturalists and purists had gained momentum. Sullivan, rejecting recovery as "remission" or "arrest," stated categorically:

An individual who has undergone a schizophrenic illness, ceased to show schizophrenic processes and resumed social living with a gradual expansion of life-interests, has in fact to the limit of the meaning of such terms actually recovered from the schizophrenic illness.

Zilboorg, on the other hand, distinguished between "social recovery" and "medical recovery" and doubted that "social recovery alone is a guarantee against the recurrence or against a gradual continuation and further development of the schizophrenic process," since the socially recovered patients "with very rare exceptions, fail to establish a complete affective contact with reality." Advocating the need of thorough psychological reconstruction, Zilboorg represented the puristic point of view, leaving judgement as to the superiority of his therapeutic method to the future. Unfortunately, few, if any, of the then anticipated follow-up studies of the results of analytical therapy have ever been carried out or presented. Hinsie, to whom had fallen the task of criticism of treatment and recovery as reported at the conference, observed that

the results reported by the psychotheraputists can be duplicated by the somato-theraputists. . . . What the psychiatrist needs before he can place a fair appraisal upon his treatment measures, is a clearer conception of the ordinary nosological factors in this type of disorder. He needs to have an accurate knowledge of the entire course of schizophrenia.

What was said in 1929, is still being argued today. The naturalists compare therapeutic results with spontaneous recoveries, while the purists insist on the therapeutically achieved elimination of fundamental pathology, whether through somatic methods

or psychological reconstruction of the personality.

The question of spontaneous courses has not been resolved. There are those who deny the usefulness of considerations of a natural course of mental disorders. Stanton sees "little more reason for thinking of a natural history of the disease than of a natural history of church membership." But few would deny that the concept of spontaneous courses, far from presupposing etiological determinants of duration, differentiates modes of outcome on the basis of prevailing developments which can be ascertained by catamnestic methods. Bleuler's reluctance to refer to "results" when describing "outcome," stems from the sober recognition that the former connotes a consequential relation, whereas the latter does not. With characteristic candor, he introduced the chapter on therapy with this guiding thought: "Except for the treatment of purely psychogenic disorders, the therapy of schizophrenia is one of the most rewarding for the physician who does not ascribe the results of the natural healing processes of psychosis to his own intervention." Whether to credit this statement with the wisdom of therapeutic insight or blame it for the implication of therapeutic limitations, depends essentially on one's "initial self-centered standpoint." I am tempted to believe that what Bleuler meant, differs but little from F. Alexander's comments on the healing of psychotherapy:

In our young field, we have not yet emancipated ourselves from the magical traditions of medicine. Modern medicine recognizes that healing is possible only because of the regenerative powers of the organism. It recognizes that a physician's function is to create conditions in which the regenerative powers can best act by removing obstacles.—Primarily nature and not the physician heals; the physician only helps the healing process.—The surgeon can only favor this healing process but cannot initiate it. The same is true for psychotherapy and psychoanalysis.

In a conceptual sense, the therapist of 1912 and 1955 hold in common the conviction that nature heals while the physician creates the conditions which enhance the regenerative powers. This is the major reason for Bleuler's demand that:

one should not wait for a 'cure'. One can consider it an established rule that earlier release produces better results.—In particular, we must consider the

qualities of the patient's relatives; they may as easily ruin the patient as they may contribute to his education.—The only, and often very practical, criterion is the patient's capacity to react in a positive manner to changes in environment and treatment.

The multitude of clinical and prognostic aspects of schizophrenia suggested to Bleuler groups rather than an entity. But there is no doubt that his concept is identical with Kraepelin's in as far as the actual disease concept is concerned:

We are dealing with a group of diseases which is differentiated on principle from all other Kraepelinian groups. One of the most common objections which is still being voiced, especially in foreign countries, is, strangely enough, that we are not always dealing with either dementia praecox or precocious dementia. Considering Kraepelin's clear definition of the concept and his emphatic mention of cures and of the incidence in older age groups, an objection such as this must be termed a gross misunderstanding on the part of those who do not want to recognize the concept and who instead continue to cling to names.

But while this disease concept includes symptoms which occur only and always in schizophrenia, Bleuler conceded the possibility of different etiological factors leading to the same symptomatic picture. He, therefore, regarded schizophrenia "not as a species of disease but as a genus" not unlike the group of organic psychoses.

As to the nature of "the disease process," he admitted: "We do not know what the schizophrenic process actually is." Convinced that only a somatic process could account for the disease, he did not exclude psychological etiology: "It is conceivable that the entire symptomatology may be psychically determined and that it may develop on the basis of slight quantitative deviations from the normal. . . ." Nevertheless, he gave serious attention to the toxin-theory for which he found some support in the work of Berger. In his experimental studies, Berger had found evidence of a toxin in the blood of catatonic patients which had exciting effects on the cortical motor center of dogs. Berger reported this in 1904. The assumption of a toxicogenic etiology was shared by Kraepelin who, advising great caution with regard to forming opinions on the subject, thought of "an auto-intoxication in consequence of a disorder of metabolism." Such hypotheses do not sound as far-fetched

today as they may have in the recent past. The current work of Heath, Hoffer and others, suggesting that oxidized derivatives of epinephrine constitute etiological factors in the genesis of schizophrenia, has not only revived interest in the toxin-theory; it illustrates once more that the cycle of themes and variations of concepts continues.

In summing up what Bleuler offered in support of his concept of the group of schizophrenias, we have first and foremost his observation of very dissimilar courses in the fact of highly similar symptomatologies. The discrepancies between life-long deterioration in some, and temporary illness followed by life-long readaptation in other schizophrenics, rendered the assumption of a uniform disease more than doubtful. Yet, common clinical manifestations as well as evidence of consistent differences in prognostic patterns suggested the existence of particular groups with generic boundaries.

FURTHER OBSERVATIONS OF THE COURSES OF SCHIZOPHRENIA

Bleuler's concept stands or falls with the confirmation of varieties of spontaneous courses characterized by consistent similarities. To examine the actuality of this concept requires that this be done within the dimension of time. What are the facts which transcend the immediacy of clinical experience; what the changes from past to present? Keeping in mind Bleuler's dictum that "any figures will serve to estimate not schizophrenia as such, but the schizophrenics admitted to any given hospital," I offer an analysis of developments which concern the hospitalized schizophrenic patients in Delaware in the years 1900-1950. Such a study of all schizophrenics, first admitted during a 51-year period, has substantial advantages if we consider the special situation in Delaware, a small state with the Delaware State Hospital as the only psychiatric hospital for every need of the state's total population. The usual difficulties, arising from selective factors in the composition of hospital populations, are reduced to the very minimum. As the only psychiatric hospital in the state, it admits patients from urban and rural areas, representing all socio-economic classes. There are units for private, semi-

private and ward patients. In the absence of other psychiatric inpatient services in the state, patients are admitted as early—or late—as first recognized to be in need of hospital treatment. Close contacts between patient, family and hospital are established and maintained through the years. Perhaps most important is the fact that every additional hospitalization during the life of patients means readmission to the Delaware State Hospital. These circumstances provide a high degree of observational control and first-hand knowledge. In more than one sense, then, this material does not only tell the story of the schizophrenics in one hospital, but of the hospitalized schizophrenics in one state.

The total number of 1,488 patients includes the 1920 and 1940 groups about which I reported in a previous study. The patients are divided into 7 cohorts. All but the last include admissions during 8-year periods. The 1948-1950 cohort is restricted to 3 years to permit a minimum of 5 years follow-up. It should be emphasized that all data pertain to each patient's status on 1-1-56. We are interested in the following questions:

a. How many patients were admitted only once; to improve, leave and never to return; or to remain continuously hospitalized. These patients are reported as *single admissions*. (S).

b. How many patients improved sufficiently to leave the hospital but returned for one or several additional admissions. Out of this group of separated patients, how many reached eventually a stable state of improvement and separation; or grew worse to require continuous hospitalization. These patients are reported as *multiple admissions* (M).

c. How many patients died in the hospital of indirect consequences of the psychoses.

ANALYSIS

Figure 1 surveys the over-all developments for each cohort. Most apparent is the growing rate of separations, ranging from 38.8% in the cohort of 1900-1907 to 84% in the cohort of 1948-1950. The chances for leaving the hospital following the first admission, thus, rose from 4 in 10 to 4 in 5. We notice the growing number of admis-

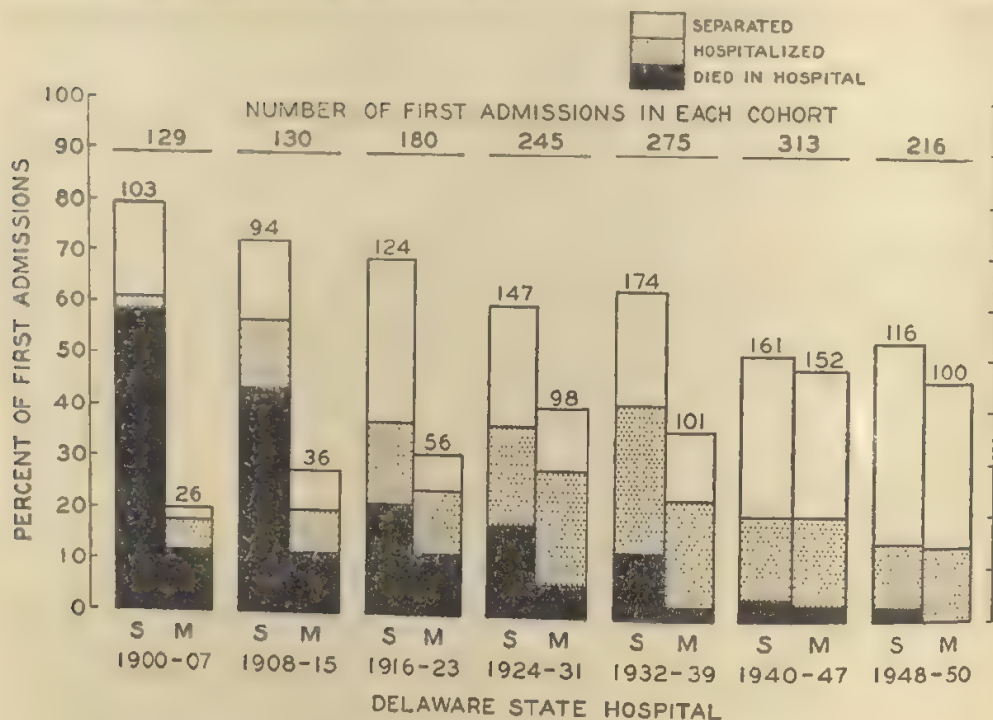


FIG. 1

sions from cohort to cohort. As separations increased, so did multiple admissions.

Figures 2 and 3 reveal the developments on the 5 and 10-year level. This makes it possible to compare the cohorts on equal temporal terms.

Figure 4 illustrates the developments within the first 10 years in greater temporal detail. To focus attention on the major differences, the first and the last 2 cohorts have been singled out. (The intermediary cohorts fill the space between the 1907 and 1947 curves in symmetrical fashion.)

What appears well documented is the fact that separations occur early, primarily within the first 2 years. This trend has persisted through the years. But we recognize 2 major differences: 1. in the earliest period only 23%, in the most recent period 59%, had left the hospital within 6 months of admission; 2. by the end of two years, the rate of separations had increased by only 11% for the earliest, by 22% for the most recent period.

The mortality figures reveal highly significant differences within the 10-year period

following admission. Mortality rates were 36% for the first, less than 4% for the last cohort (each intermediary cohort showing a further drop of mortality). The question of age differentials can hardly be omitted in this connection. The "mean age at admission for each cohort" and the "mean age at death for patients from each cohort" has been tabulated as follows:

Cohort	Mean Age	
	Admission	Death
1900-1907	38.0	54.8
1908-1915	35.6	53.3
1916-1923	29.6	51.3
1924-1931	32.6	51.8
1932-1939	31.4	50.3
1940-1947	31.1	40.4
1948-1950	31.4	45.6

The danger to life associated with complications of somatic therapies seems insignificant compared with the high death rate of earlier years.

Figure 5 represents in detail the further developments of patients who have in com-

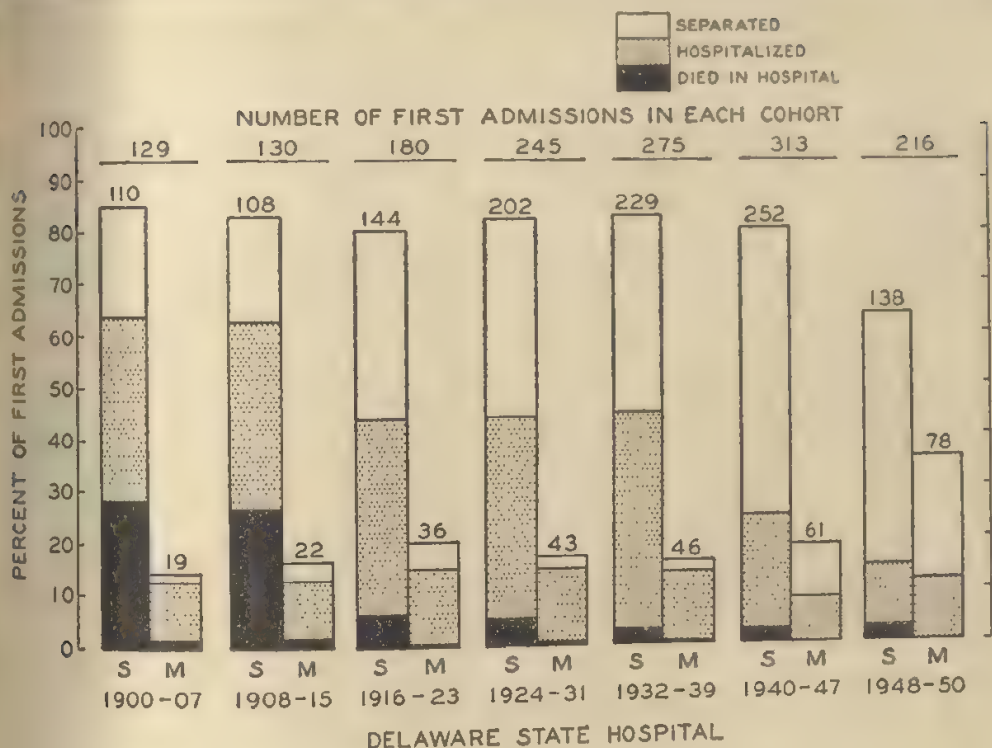


Fig. 2

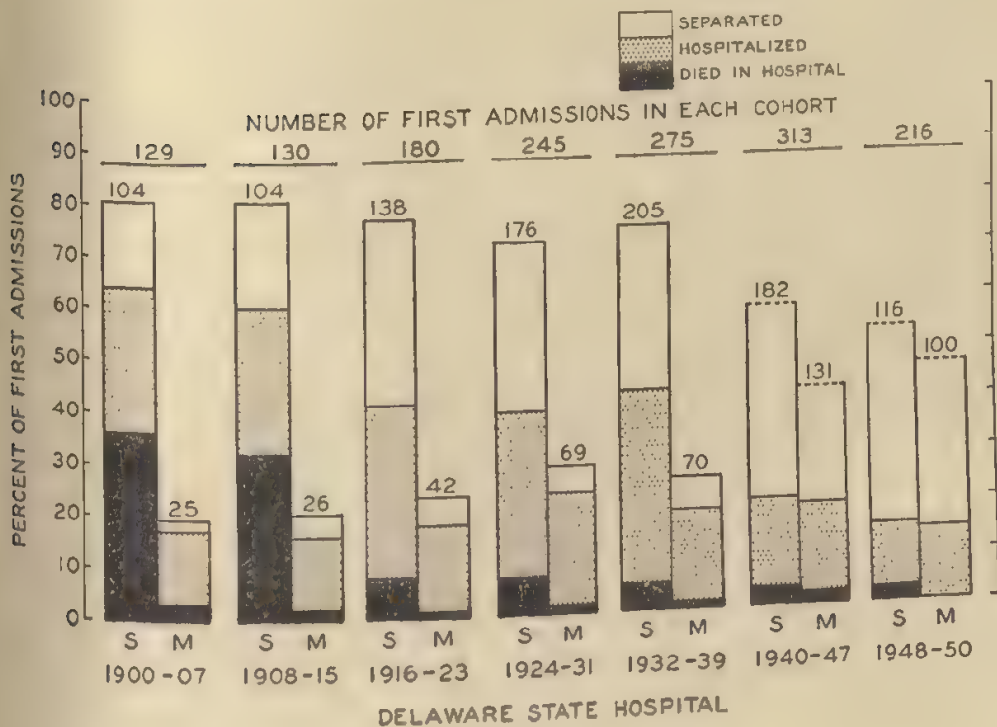
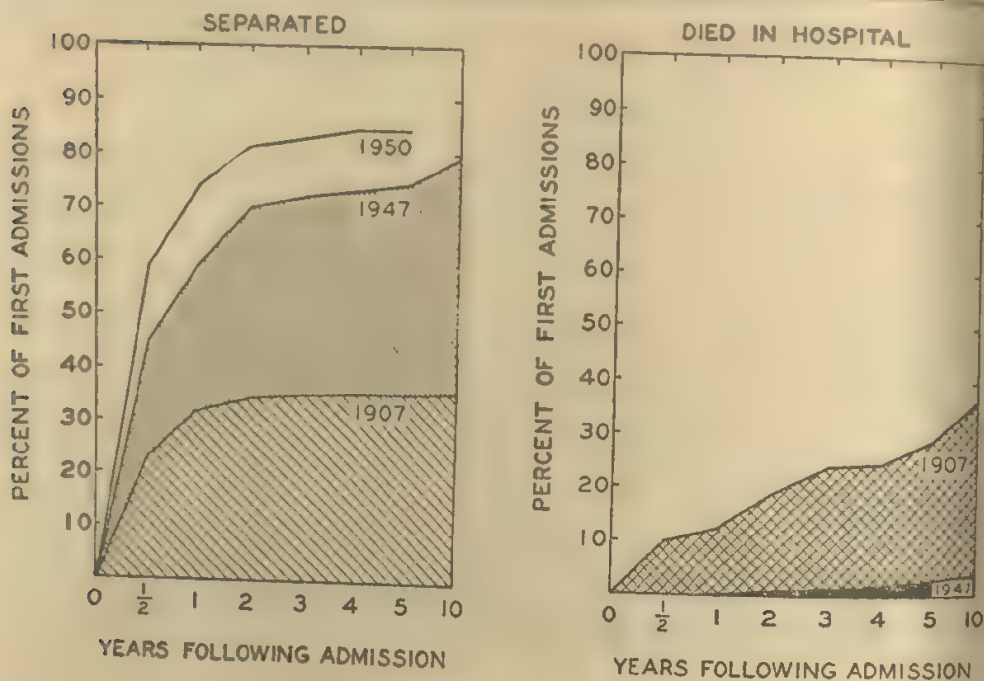


Fig. 3



DELAWARE STATE HOSPITAL

FIG. 4

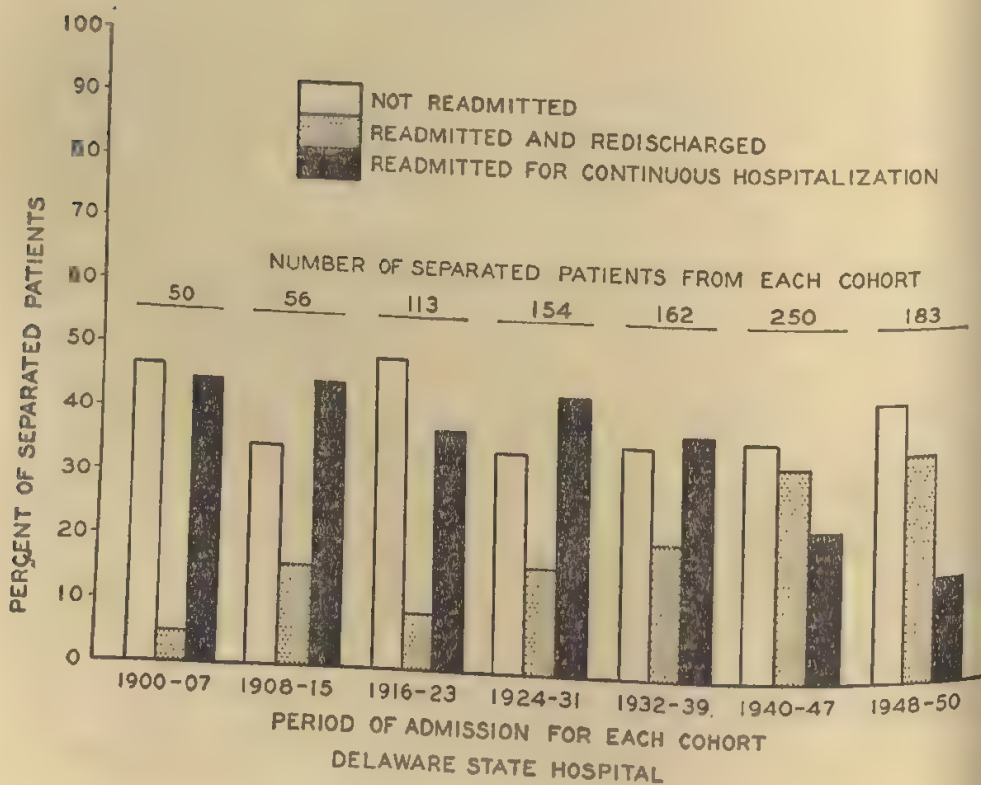


FIG. 5

mon separation following first admission. What seems quite significant is the rather consistent proportion of about 35-45% of patients who remained permanently separated. This constitutes the group with the most favorable prognosis. Each cohort shows that approximately one third of the patients who left the hospital, remained sufficiently stable to stay out. Marked changes are reflected in the movements of patients with multiple admissions. Formerly, their chances for eventual recovery were extremely low as indicated by the high rate of patients who remained for continuous hospitalization. A decisive change for the better occurred after 1940, when the rate of recoveries, in spite of multiple admissions, began to rise steadily.

COMMENT

Even a glance at these developments must convince us of their actual and potential significance. It is not the purpose of this analysis to enter into many deserving statistical considerations or to compare the data with those of similar studies. This will be done in another publication.

We are here concerned with the differentiation of groups on the basis of similarities of course of illness. Without any difficulty, we can make the following observations. First, there is no question of decisive changes after 1940. The introduction of somatic therapies facilitated a steady increase of separations; this is equally true for single and multiple admissions. Of no lesser importance, however, is the fact that the proportion of optimal improvements, *i.e.*, permanent separations after a single admission, remains virtually unchanged throughout the years. We find no indication that modern approaches, somatic treatments or psychotherapies, have contributed in any measurable degree toward an increase in the proportion of this group.

It would be erroneous to assume that the high rate of continuous hospitalizations during the earlier period can be blamed on the severity of the psychoses or the lack of available therapeutic techniques. There is certainly evidence that various factors contributed to the reduction of chronically hospitalized cases. With improved standards of hospital care, a growing number of pa-

tients received individual attention. The community became more receptive and tolerant with regard to patients who showed fair, but by no means convincing, degrees of improvement. Modern therapies and social directions brought about tremendous changes in the clinical profiles of schizophrenic states. They reduced the severer modes of negativistic and autistic behavior. Patients became less disturbed and behaved more sociably. The speed with which somatic treatments eliminated the most disturbing symptoms, spared patients the experience of isolation and withdrawal which, by the mere fact of prolonged existence, had contributed to affective deterioration.

To put the unfolding story in obvious terms, one cannot deny the evidence that schizophrenia can indeed be a temporary, a recurring and a progressive disorder. Nor can we overlook that the fate of individual patients could not be prognosticated at any given time. What we call prognosis is still to be made predictively; it is as yet a retrospective statement of fact.

Not only is there evidence that modern treatments have greatly enhanced the chances for improvement and return to social existence; there is also every indication that the attitudes toward schizophrenic patients underwent profound changes. Both treatment and social tolerance of schizophrenic behavior have been effective in speeding up the exodus from the hospital. While mortality has ceased to be a danger and while the more chaotic aspects of psychotic behavior have yielded to therapeutic modification, there remains the distressing fact of total failure in about one-third of all patients. We do not know why these patients remained untouched by the social opportunities and therapeutic approaches which they shared with all others.

SIGNIFICANCE OF PRESENT FINDINGS IN THE LIGHT OF BLEULER'S CONCEPT

What does this analysis of the courses of schizophrenia contribute to an assessment of Bleuler's concept? There is every suggestion of the existence of identifiable groups which are characterized by a high degree of internal consistency. The group of optimal recoveries is one. We can no longer be in

doubt that these schizophrenics enter the hospital with a good prognosis which manifests itself regardless of treatments. These patients did well at the turn of the century; they do equally well today. We cannot entertain the illusion that treatments have increased their number.

The non-recoverable group is another. If we assume that Bleuler's permissive policies reduced the number of pseudo-chronic patients to the lowest possible minimum, we find that his 22% with "severe deterioration" roughly corresponds to the current ratio of most severe cases. These are the patients who remained refractory to treatment. It goes without saying that patients in the last 2 cohorts had every type of modern treatment from the time of admission; chronic patients from earlier cohorts also had the benefit of treatments, though many years later. While this is anything but a clinically homogeneous group, the fact remains that these are the schizophrenics with the most unfavorable prognoses. They consist of patients of various ages who had various types of onset and dissimilar social backgrounds. Thus far, it has rarely been possible to identify them during the acute stages. Considerable evidence supports the assumption that internal factors account for the fact that modern treatments remained here as ineffective as did Bleuler's clinical management. To put it differently, it may have taken us more than 30 years to separate the pseudodeteriorating patients from those who, to all intents and purposes, lack the capacity to react with any degree of improvement.

These 2 groups represent the extremes. There remain the groups with various courses of multiple relapses and improvements. We are dealing with schizophrenics with varying degrees of adaptive capacities, some establishing lasting states of functional compensation, others drifting into chronic states of illness. These groups have little but multiple admissions in common. External factors of every variety—social, economic, familial—seem to contribute considerably to reinforcement or disintegration of these patients' ability to carry on.

The existence of the two extreme groups supports Bleuler's concept of the schizophrenias. What significance we attribute to

their characteristics, remains a matter of interpretation. It is not the purpose of my presentation to draw conclusions. What I am trying to develop concerns the potential significance of Bleuler's concept for future research on schizophrenia. The inescapable fact before us is this: no decisive new contributions to our knowledge in schizophrenia have been made in recent years. The schism between the protagonists of psychological and somatic concepts continues. Notwithstanding highly sophisticated formulations of psychodynamic, interpersonal and psychobiological frames of references, the notion of schizophrenia as an entity persists. On purely theoretical grounds, this will be denied by many. *De facto*, conceptual references continue to be to schizophrenia, not schizophrenias. This is as true in the laboratory as in the clinic.

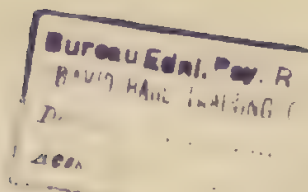
Whether one believes in natural or spontaneous courses of schizophrenia is unimportant. What matters is whether or not every scientific effort is made to ascertain what happens to schizophrenic patients. Aprioristic concepts are obstacles to scientific progress. If, as I see it, Bleuler's concept appears as valid today as it seemed valid to him in the beginning of this century, further advances in knowledge may well have been retarded by the notion of schizophrenia, or even the schizophrenic patient, as a uniform object of research and treatment. On the other hand, should the consistently different courses, as they manifest themselves in the groups, be interpreted as social artifacts on whatever grounds, they must be proved to be artifacts. Thus far, they have generally been ignored.

The implementation of the group concept into clinical and investigative methodologies would quite certainly bring about constructive changes in the identification of research targets. Incidentally, acceptance of the group idea could prove therapeutic with regard to the prevailing manic-depressive outlook which, time and again, seduces us to throw off the gloom about an allegedly hopeless disease by swinging into the realm of euphoric overexpectations whenever a new treatment or theory presents itself. Acknowledgment of the actual development in the lives of schizophrenic patients demonstrates that

the evidence of social adaptation becomes increasingly convincing. It would be tragic, however, if the ideal goal of reconstructive psychotherapies should lead to premature belittling of social recoveries. As of now, Bleuler's philosophy of returning patients to normal social surroundings, still appears to be our most effective therapeutic tool.

BIBLIOGRAPHY

1. Alexander, Franz: *Am. J. Psychiat.*, **112**: 326, Nov. 1955.
2. Berger, Hans: *Monatsschrift f. Psychiatrie und Neurologie*. Bd. XVI, Heft 1, 1904.
3. Bleuler, Eugen: *Dementia Praecox or the Group of Schizophrenias*. New York: International Universities Press, 1950.
4. Bleuler, Manfred: *Bulletin, Isaac Ray Medical Library, Butler Hospital*, **1**: 47, April-July, 1953.
5. Bleuler, Manfred: *Bulletin, Isaac Ray Medical Library, Butler Hospital*, **3**: 1, Jan.-Apr., 1955.
6. Freyhan, F. A.: *Am. J. Psychiat.*, **112**: 161, Sept. 1955.
7. Hinsie, L. E.: "Criticism of Treatment and Recovery in Schizophrenia." *Schizophrenia*. Vol. X Research Publications, Assoc. Res. Nerv. & Ment. Dis. p. 211, Baltimore: Williams & Wilkins Co., 1931.
8. Hoffer, A.: *J. Clin. & Exper. Psychopathol.*, **18**: No. 1, 27, 1957.
9. Stanton, A.: *Am. J. Psychiat.*, **112**: 167, Sept. 1955.
10. Sullivan, H. S.: "The Relation of Onset to Outcome in Schizophrenia." *Schizophrenia*. Vol. X of a Series of Res. Publ., Assoc. Res. Nerv. & Ment. Dis. p. 111, Baltimore: Williams & Wilkins Co., 1931.
11. Wexler, Milton: 1950 Conference at Yale on Psychotherapy with Schizophrenics. See *Bull. Menninger Clin.*, **15**: No. 6, p. 221, Nov. 1951.
12. Zilboorg, Gregory: "The Problem of Affective Re-Integration in the Schizophrenias." *Schizophrenia*. Vol. X Res. Publ., Assoc. Res. Nerv. & Ment. Dis. p. 191, Baltimore: Williams & Wilkins Co., 1931.



A STUDY OF CASES OF SCHIZOPHRENIA TREATED BY "DIRECT ANALYSIS"¹

WILLIAM A. HORWITZ, M.D.,² PHILIP POLATIN, M.D., LAWRENCE C. KOLB, M.D., AND
PAUL H. HOCH, M.D.

In the past decade, characterized by the increasing problem of chronic mental illnesses, any method of treatment promising alleviation or cure has been worthy of investigation. In any medical discipline, all new formulations are subject to validation and verification. Any new method of therapy, particularly one claiming cure of an illness known to be chronic with a tendency toward nonrecovery, would be subject to scientific scrutiny. It seems obligatory, in all medical disciplines, to investigate a reported method of treatment and its results, and to determine the extent or amount of change and the temporary or lasting nature of the therapeutic results.

This procedure has been followed in the field of psychiatry whenever any new treatment has been presented. To mention only a few examples, the removal of foci of infection, the use of insulin coma, metrazol and electroshock were all advanced as treatment methods for schizophrenia, all initially, claiming a high degree of therapeutic effectiveness. Subsequent investigations disclosed that in some instances, exaggerated claims had been made. Thus further evaluation placed these treatments in a more proper perspective.

Over the years the staff of the New York Psychiatric Institute has pursued a series of follow-up studies investigating the effectiveness of the various therapeutic procedures offered for the mentally ill. The present report represents one such study directed to assess direct analytic therapy in the treatment of schizophrenia over a long term period.

For those of us who may not recall the method and the hopes for it, we shall review the outstanding points in the original presentation.

¹ Read at the 113th annual meeting of The American Psychiatric Association, Chicago, Ill., May 13-17, 1957.

² N. Y. Psych. Inst., 722 W. 168th St., New York, N. Y.

The major description of the technique was presented by Dr. John Rosen in an article "The Treatment of Schizophrenic Psychosis by Direct Analytic Therapy" in the *Psychiatric Quarterly*, January, 1947. The author stated that in his method of therapy applied in 37 cases of what he termed "deteriorated schizophrenia," he was

called upon to converse with the patient in the language of the unconscious and to be in a position to interpret the unconscious to him at every single available opportunity.

Each symptom, each remark, every symbol must be untwisted, clear down to the earliest ontogenetic and even phylogenetic roots in the unconscious. Only when the symptom is so clearly unmasked to the patient that it will no longer serve its purpose, will he be able to relinquish it for a more sensible way of handling his instinctual drives. The task is not completed with the resolution of the psychosis and can only be considered concluded when the transference is as completely worked out as we aim to do in ordinary analytic procedures.

This technique required the expenditure of many hours with each patient. For many patients, this required time averaged from 1 to 3 hours daily and in some cases up to 10-12 hours per day. Rosen stated that it was necessary to establish the therapist as a substitute figure of a good parent (either father or mother) to love, to feed and on some occasions to bathe or attend to the patients' personal needs.

By this method of establishing a substitute protective parental figure and interpreting the unconscious directly, Rosen claimed therapeutic results leading to recovery in all 37 cases following treatment from 3 days to 11 months—the average period of treatment was 2 to 3 months.

Recovery was defined in the following terms:

Regarding recovered patients, let me define 'recovery'. As I use this term, it does not mean merely that the patient is able to live comfortably outside an institution, but rather that such a degree of integrity is achieved that the emotional stability of the patient and his personality and character structures are so well organized as to withstand at least as much environmental assault as is expected of a

normal person, that is, of a person who never experienced a psychotic episode.

Rigid criteria for the diagnosis of schizophrenia were set. Of the original 37 cases reported, all were considered schizophrenic. Quoting from the original article,

The diagnoses of schizophrenia were in all cases made by physicians other than the present writer, in most cases concurred in by more than one physician. Because the question of diagnosis is certain to be raised by a presentation of this sort, the writer has purposely excluded from this report 4 other cases—also diagnosed schizophrenia by other psychiatrists—but in which he feels the symptomatology was mainly manic-depressive. It has been the aim, in investigating the possibilities of this therapy, to treat initially only patients who were severely schizophrenic beyond the possibility of a doubt. It should be said that the 4 where the writer found manic-depressive features have made apparently complete recoveries also.

In 1952, Dr. Rosen's book *Direct Analysis* was published: here he reaffirmed the original statements in regard to therapeutic outcome. No major modifications of the therapeutic method were described. The status of the original 37 patients was reviewed (p. 95). It was reported that at that time "six were psychotic and probably institutionalized. Of the remaining 31, none was considered psychotic, all were doing well. . . ." It was added that "Those who received a full analysis after the resolution of the psychosis are doing particularly well."

Any therapy that promises so much in the treatment of decompensated schizophrenia unquestionably deserves serious consideration and investigation, particularly if done over a long period of time. At the time of the original report, it was known that many of the female patients had been treated by Dr. Rosen at the New York Psychiatric Institute. We have been able to identify and follow 17 of the female patients of the original series of 37 treated by him while they were at the Psychiatric Institute or after their discharge. We were able also to identify 2 male patients treated by this technique, one a former patient at the Psychiatric Institute, the other a patient of Brooklyn State Hospital (the latter was identified through courtesy of Dr. N. Beckenstein). Thus, we have follow-up material on 19 patients, the other 18 were not available to us.

The follow-up investigation consisted of interviews with each patient simultaneously by at least two members of the Institute staff or interviews under similar circumstances, of the nearest relative, when the patient could not be seen, and social service interviews with the nearest responsible relative at home in instances where neither patient nor relative would come to the Institute. A second source of data was the hospital records whenever patients were admitted subsequently to other mental hospitals. Dr. Malzburg of the New York State Department of Mental Hygiene assisted in the location of some of the patients after their discharge from the Psychiatric Institute. In the more recent follow-up interviews with patients and relatives the material was recorded on tape thus allowing for review and subsequent study.

Table 1 indicates the number of patients followed by the various methods described before:

TABLE 1
FOLLOW-UP CONTACT

Patients interviewed by authors.....	12
Patients interviewed by social service department	3
Reports obtained from family members.....	8
Reports obtained from other hospitals.....	11
Dead	0
Total number of patients located and studied...	19

A study of the course of their illness and of the treatment provided the patients after the termination of the original therapy disclosed that 10 of 19 had required some form of somatic therapy: one additionally had a thyroidectomy performed: 4 had psychotherapy only.

Of the 19 patients presented in the original report as schizophrenic by Dr. Rosen, the diagnosis established by the staff of the Psy-

TABLE 2

TREATMENT OBTAINED FOR PATIENTS AFTER INITIAL
TREATMENT BY DIRECT ANALYSIS

Somatic therapies	10
Psychotherapy only	4
Direct analytic therapy cont'd.....	4
No therapy	1
Total	19

chiatric Institute at the time of the first admission was schizophrenia in only 12 patients. Of the remaining 7 patients, 6 had been diagnosed psychoneurosis, and one manic-depressive.

The follow-up of these 7 cases, shows that their subsequent course was not characterized by repeated hospital admissions. Neither did they subsequently have repeated somatic treatment. One patient in this group of 7, originally diagnosed psychoneurosis by the Institute was twice admitted to a state hospital and on each occasion had electroshock therapy. The state hospital diagnosis in this case was manic-depressive psychosis. This is the only case in this group of 7 that was certified to a hospital and the only one that had any subsequent treatment other than psychotherapy. All of the 7 patients in this group are at present out in the community and have been for several years. One patient, who continued her contact with Dr. Rosen for several years has developed from a shy, sensitive, insecure and jealous person to a mature socially functioning individual. She refused contact with us but her husband, a physician, gave a glowing account of her improvement which they both attributed to the "direct analytic treatment." Of the others, in this group of 7, one was unwilling to contact us, one sees her original therapist, (the other 4 expressed themselves as indifferent and uncertain as to what they had achieved from their period of direct analytic therapy). Of these, one feels that she was cured by a later psychiatrist who employed body massage and bromides, one is seeing a chiropractor and feels fine and one after "suffering through" years of psychoanalysis and readmitting herself to our hospital for psychosurgical consideration was cured after symptoms of a toxic adenoma had fully developed and her thyroid had been removed. Thus this group of 7 patients originally considered by the Institute as non-schizophrenic has followed a course similar to that one would ordinarily expect in a 10-year survey of a group of non-schizophrenic patients.

When we survey the 10-year course of the 12 patients considered schizophrenic originally by the staff of the Psychiatric Institute and subsequently by all psychiatrists seen in the next 10 years, the course is remarkably

different from that of the previous group. By the time the original report appeared in print (January, 1947), 5 patients had already been readmitted to mental hospitals (Cases 7, 15, 22, 23 and 29). Of the 12 cases officially diagnosed as schizophrenia in the Institute records, 9 have had from 2 to 5 admissions to mental hospitals during the past 10 years. Two have undergone psychosurgery and another has continued to have symptoms sufficiently severe to have requested additional psychosurgical evaluation. More than one-half of these patients in the subsequent history and later hospital admissions, were treated with electroshock, insulin coma, continued psychotherapy and in recent years tranquilizing medication. In this group it is evident that direct analytic therapy by itself failed to lead to any sustained therapeutic result. Of the 12 patients originally diagnosed by the Institute as schizophrenic and in the first report as "chronic deteriorated" schizophrenics, none has attained or sustained the standard for recovery set forth in Rosen's original article.

The details of the varieties of treatment offered are shown in Tables 3, 4, and 5.

TABLE 3

HOSPITAL ADMISSION AFTER DIRECT ANALYTIC THERAPY

Patients readmitted to mental hospitals.....	12
Total number of readmissions.....	29

TABLE 4

TREATMENT OBTAINED AFTER INITIAL DIRECT ANALYTIC THERAPY

Continued with direct analytic therapy.....	4
No treatment	1
Other forms of psychiatric treatment required..	14

TABLE 5

OTHER FORMS OF PSYCHIATRIC TREATMENT REQUIRED

Individual psychotherapy (7)	4
Psychotherapy only	10
Somatic therapy	8
Electroshock	2
Insulin shock.....	1
Metrazol	2
Psychosurgery	3
Pharmacotherapy	1
Thyroidectomy	0
Psychoanalysis	0

It must be stated that 10 of these patients are out of hospitals at the present time; 2 are in hospitals; one a post-lobotomy case is unemployed and completely dependent on her mother; one other post-lobotomy patient is semi-dependent, occasionally works, is considered peculiar and odd by the family and her present therapist. Several are housewives and manage with support from their families. Two are making a fairly good adjustment: one who had an acute episode of catatonic excitement has been quite well for 10 years and works as a stenographer. Unmarried, she is considered as a "little saint" by the family. Although the family feels "she was cured by the Psychiatric Institute and prayer," the patient wants to forget the hospital and the whole experience and refused to be seen. The other doing well is an "ambulatory" schizophrenic, never sick enough to be admitted to the hospital and had been treated originally in the OPD of the Psychiatric Institute. She is married and has children. She also wishes to forget and refused to be interviewed. Her mother stated that the family feel that the direct analytic therapy was not of assistance. The patient found it necessary to consult another psychiatrist following the direct analytic treatment in our out-patient department.

Of the two male patients one has returned to Brooklyn State Hospital every 3 or 4 years for a course of shock treatment. The other, several years ago received multiple forms of somatic treatment, followed by years of at-

TABLE 6
ADJUSTMENT LEVEL

	1947	1957
In hospital	5	2
At parental home.....	?	2
Dependent—not working	?	1
Employed at home.....	?	8
Employed out of home.....	?	6
		—
		19

tendance at a V.A. clinic. At present and for the past several years however, he has been married, has operated a gasoline station and requires no further treatment.

In summary, this group of patients has failed to show any outstanding therapeutic response. The several instances of fairly successful adjustment are compatible with the ordinary reactions seen in the absence of specific therapy. The other less successful adjustments are also consistent with the usual course of untreated schizophrenic patients.

The findings in our 10-year follow-up study of the course of these 19 patients fail to sustain the originally reported statement of therapeutic effectiveness of direct analytic therapy in schizophrenia. Many of the patients who at the time of the original report were improved, subsequently relapsed and required other treatments. Whatever the merits of direct analytic therapy for schizophrenia, the claim that it results in a high degree of recovery remains unproven.

FURTHER EXAMINATION OF DIAGNOSTIC CRITERIA IN SCHIZOPHRENIC ILLNESS AND PSYCHOSES OF INFANCY AND EARLY CHILDHOOD¹

J. LOUISE DESPERT, M.D. AND ALBERT C. SHERWIN, M.D.²

The purpose of this paper is to re-examine diagnostic criteria of psychoses of infancy and early childhood, with special emphasis upon schizophrenia. This would seem timely because diagnostic criteria for these conditions at present appear to vary from school to school and place to place (2, 3, 7, 13, 15, 17). A suggested system of distinguishing between the various types of psychoses will be offered, and features of special prognostic significance will be discussed.

Although the concept of schizophrenia in childhood has met with opposition since some of its early formulations (22, 16, 6, 13), more than one observer has recently commented on how freely many psychiatrists, pediatricians and neurologists now make this diagnosis in any child displaying psychotic features in the absence of neurological signs (8, 13, 18). Some formulations like those of Bender³ seem so broad as to permit the in-

clusion of cases with suggestive structural etiology, which would in adult psychiatry contraindicate such a diagnosis. Sometimes the diagnosis of autism may be made in cases where autistic symptoms are indeed evident but where the picture fails to meet Kanner's original criteria.

Mahler's formulations of a symbiotic type of schizophrenic illness in young children (17, 19), as differentiated from an autistic type, is oftentimes difficult to apply in terms of clinical diagnosis.⁴ Mahler of course states that in the later stages, the two pictures tend to become less distinct, and Hirschberg and Bryant point out that "a child who uses predominant symbiotic defenses at one period may adopt autistic ones at another" (10). In the authors' experience, even in the early stages, clinical pictures are often so mixed that they cannot be said on this basis clearly to belong to either group. Certainly clinical experience does not support a hypothesis, that all schizophrenic children not belonging by virtue of time of onset to Kanner's group belong to a clear symbiotic group.

We are not completely in disagreement with those who tend to describe infantile psychoses in terms of broad concepts of atypical development (15) or deviated ego functions (3), preferring to side-step the question of schizophrenia. The exception

¹Read at the 113th annual meeting of The American Psychiatric Association, Chicago, Ill., May 13-17, 1957.

²From the Department of Psychiatry, Cornell University Medical College, and the New York Hospital (Payne Whitney Psychiatric Clinic).

³"A clinical entity, occurring in childhood before the age of 11 years, which reveals pathology in behavior at every level and in every area of integration or patterning within the functioning of the central nervous system, be it vegetative, motor, perceptual, intellectual, emotional, or social. Furthermore, this behavior pathology disturbs the pattern of every functioning field in a characteristic way. The pathology cannot therefore be thought of as focal in the architecture of the central nervous system, but rather as striking at the substratum of integrative functioning or biologically patterned behavior." (1942) (1) "We now define childhood schizophrenia as a maturational lag at the embryonic level in all the areas which integrate biological and psychological behavior; an embryonic primitivity or plasticity characterizes the pattern of the behavior disturbance in all areas of personality functioning. It is determined before birth and hereditary factors appear to be important. It may be precipitated by a physiological crisis, which may be birth itself, especially a traumatic birth. Anxiety is the organismic response to this disturbance which tends to call forth symptom formation of a pseudo-defective, pseudoneurotic, or pseudopsychotic type . . ." (1955) (2).

⁴Mahler defined symbiotic infantile psychosis as a psychosis "in which the early mother infant symbiotic relationship is marked, but does not progress to the stage of object-libidinal cathexis of the mother. The mental representation of the mother remains, or is regressively fused with—that is to say, is not separated from the self. . . . As soon as ego differentiation and psychosexual development confront the child and thus challenge him with a measure of separation from and independence of the mother, the illusion of the symbiotic omnipotence is threatened and severe panic reactions occur. . . . Restitution in symbiotic psychosis is attempted by somatic delusions and hallucinations of reunion with the narcissistically loved and hated, omnipotent mother image, or sometimes by hallucinated fusion with a condensation of father-mother images . . ." (17).

which we take is that this leads again to the inclusion of cases into one large category which may well represent several different types of illness processes. Also we continue to believe that there is such an entity as schizophrenia in early childhood.

As one reviews the kinds of cases of psychoses of infancy and early childhood variously named as schizophrenic, atypical, autistic, or symbiotic, the feature of an autistic defense appears present to some degree in all of them. Autism does not refer to a simple withdrawal. Bleuler originally described it as "a detachment from reality. . . . A peculiar alteration of the relation between the patient's inner life and the external world, (wherein) the inner life assumes pathological predominance." (4) Associated with the autism is a disturbance to some degree in communication, which generally appears to be a refusal to communicate. But Bleuler did not group the various schizophrenias together on the basis of autism or autistic thinking, important as he considered these features to be to the schizophrenic process. Indeed, in a discussion of autistic thinking, he described the latter as present to some degree in normal individuals (5).

In the opinion of the authors, the grouping together of otherwise diverse syndromes occurring in infancy and early childhood on the basis of autistic features alone is, at the present stage of our understanding of these conditions, inadequate and therefore unjustified. It is possible and advisable, in our opinion, to distinguish syndromes of early infantile autism, schizophrenic illness, and psychoses in mentally defective children from each other. It is especially important to distinguish the latter group from the other two, since the possibility of a structural basis is very great here, and may well exist, in the absence of definite neurological signs (for example, a cerebral a—or dysgenesis). It is also necessary to distinguish Kanner's group from the schizophrenias, since the probability of determining constitutional factors is particularly strong here, the predisposition to anxiety extreme, and a dysfunction even to the possibility of organic factors not yet excluded by post-mortem study. In addition, of course, there are psychoses which represent affective reactions, which

although rare in this age group, may occur and should be distinguished as such. The degenerative and epileptic psychoses will not be considered and are generally more clearly recognized.

The following case histories may serve to illustrate 3 principal types of psychoses seen in this age period (and often grouped together), with their distinguishing features.

CASE HISTORIES

Case 1.—Male child first seen at age 4 years and 1 month. Picture dominated by autistic behavior and rigid adherence to established routine. Eldest of 3 children. Normal full-term delivery. No major feeding difficulties. Smiled at 6 weeks and in response to mother. Enjoyed being picked up, with anticipatory response and appropriate posture. Alert to environment, and sensitive to noises. Following mother with eyes from 3 months. At times appeared "phlegmatic," at other times cried excessively at small frustrations. Crib biting and rocking during first year. Sat at 6 months, stood at 10 months and walked at 1 year. Sister born at his age 15 months. From this time, gradual diminution of interest in environment and people. Solitary play, interest in lights and music. Severe and frequent temper tantrums. From age 2, insistence upon sameness of routine, changes in which precipitated tantrums and panic. Vocal sounds during second year. Isolated words or phrases at 2½, coincident with sister's learning to talk. For next year did not use words to communicate, or form sentences. Mimicked or talked to self unintelligibly. Continued, however, to enjoy fondling by parents, responding with embraces. Just before age 4, began to communicate requests with words or phrases and occasionally formed sentences. Still responded to most questions by ignoring or repeating. Stanford Binet I.Q. of 80 at this time. Patient's mother, age 27, detached, attractive, intelligent and college-educated, with artistic ability. Her father said to be alcoholic and to have had psychiatric hospitalizations with question of schizophrenia. Her older sister has child treated at another center with diagnosis of "mildly atypical" condition. Mother describes phobic symptoms during childhood. As adult, characteristically accepts situations with resignation and detachment. Father, age 30, a Guatemalan, from wealthy family. Had unsuccessful career as artist and businessman. Has not been self-sufficient and requires help from parents. Has received two courses of psychotherapy for a "character disorder." Younger sister and brother apparently normal.

On examination at 4 years and 1 month, patient appeared intelligent, well-developed and attractive looking. Repetitive drawing of traffic lights, play with any objects which could be made to represent traffic lights, intense insistence on sameness of routine, and limited responsiveness. Most of speech inarticulate or incoherent and did not seem intended for communication. Seen twice a week over a 2-

year period in play therapy. Changes noted have included development of useful and communicative speech. Was able early to express warmly and verbally feelings of affection for and anger at therapist. Play activities expanded, becoming generally appropriate, although some repetitive and perseverative play continues. More responsive at home where he now communicates freely, plays with siblings, and with mother. Satisfactory adjustment to nursery school and recently kindergarten. Writes and draws well, interested in numbers and arithmetic. Now tolerates many changes in routine, and tantrums less frequent. No increase in demands upon or clinging to mother, therapist, or to other individuals. At times of stress reverts to autistic defenses, becoming silent or incoherent, returning to solitary play, bizarre gesturing, ignoring of adults, and passively enduring unpleasant situations. Recent Stanford Binet I.Q. at age 6—108.

DISCUSSION OF CASE

This is a schizophrenic child with onset of major psychopathology essentially after the age of 1½, in the setting of certain traumatic familial situations. His symptomatology included autistic defenses as the outstanding features. There was a disturbance in affective contact with reality, and a thinking disorder characterized primarily by an overdeveloped fantasy life which the child could not properly distinguish from the real world, and by occasional incoherence. In addition, an intense insistence on sameness of environment and repetitive and stereotyped play were present. Bizarre gesturing and mannerisms completed the picture. Except for the age of onset, and the more moderate character of the autistic isolation, this picture is like that of early infantile autism. That is, the defenses employed by the child are similar to those seen in Kanner's group, if of less marked severity. With improvement, the autistic defenses became less marked without appearance of symbiotic features, as might be anticipated from literature. In times of stress, the child continues to exhibit autistic manifestations. The history, psychiatric and psychological examinations taken together suggest that communication was not too markedly impaired and in any event it improved somewhat with growth even before therapy. This was an index to his capacity for affective contact as well as his intellectual ability even before intelligence testing could demonstrate the latter.

Case 2.—Five-year-old boy with a history of autistic behavior, uncommunicativeness, intense in-

sistence on sameness of environment, hyperactivity and repetitive and destructive activity. Normal pregnancy and delivery. Smiled in early weeks of life but not necessarily in response to anyone. By end of first year "was difficult to get a smile out of him." Little anticipation at being picked up and appeared to draw back when held. Did not follow mother with eyes. Did not seem alert to or interested in environment. Rocking especially with music towards end of first year. Sleep poor. Selective of and insistent on certain special foods before age 1 but rapid weight gain. Sat at 6 months, stood at 7 months, walked at 10½ months. Brother born around his age 1. During second year hyperactive and destructive. Severe tantrums, unresponsive. Neither permitted nor sought physical contact. Became adept at spinning objects and tearing paper. No interest in toys. Spoke few words at age 2 but only for brief period. Neither words nor vocalizing used for communication. Made known demands by pushing or pulling. Psychometrics at 3½ showed atypical retarded pattern but successes in a few tasks at his age level. Patient's mother, age 38, had been a successful business woman, an active aggressive person, at first openly rejecting the patient whom she could not "control." Described being repulsed by "little boys" since childhood, but thought it would be "good for her" to have a boy. Father a passive, good-natured man, has suffered business reverses in last several years. Both parents had difficulty accepting child's illness. Sister, age 7, brother, age 3, have shown no known psychopathology similar to patient's.

On examination at age 4, appeared out of contact and hyperactive. Spun objects in highly organized ritual. On once-a-week play therapy over 10 months has made some affective contact. Now speaks a few words, expresses self more intelligibly with vocalizing, and is more responsive at home.

DISCUSSION OF CASE

This is a classical example of early infantile autism, both by age of onset and symptomatology. The fact that this child displayed early inability to make affective contact with other human beings or even to perceive them as such, and that his communication almost from the beginning seemed strikingly limited deserves special emphasis. To evaluate the communicative capacity of an autistic child, it may not be necessary to wait until the age of 4 or 5 to see whether he has developed speech (9, 14). Indeed, what we call responsiveness in an infant may represent forms of communication and usually more than just interest in or attention to us. A careful history and examination of the manner in which infantile gestures and vocalizations are used with respect to communication as well as the character of behavior, may give the clue.

Comparison of our therapeutic results in such cases with those who maintain that intensive treatment is essential reveals little difference in the gains thus far.

Case 3.—A. G. is a 2½-year-old boy with a history of limited responsiveness, bizarre behavior including gesturing and hyperactivity, and uneven but subnormal development since age 1. Older of two children. Exposure of mother to German measles during pregnancy with gamma globulin immunization and no clinical symptoms. Normal delivery. Smiled around age 3 months. Good anticipatory and postural responses to picking up. Sat at 5-6 months, crawled at 9 months, walked at 12 months. Fell from table to floor at age 2 months without unconsciousness or known sequelae. At age 6 months had herniorrhaphy with general anesthesia without known complications. Just before first birthday, visiting grandmother claimed child was "dreamy" and unresponsive, not sufficiently alert. Father sick in hospital for 2 months when patient was 16 months old. In next 4 months baby started rocking, mouthing of objects, was resistant to teaching. At age 19 months a psychiatric examination revealed no functional play with toys, special interest in feeling textures, few sounds, hyperactivity. Finer movements at about 10 month level. He was said to respond emotionally and physically to mother when held in her arms, would also embrace father. At 22-23 months, he was jumping up and down, endlessly making noises, appeared to relate better, was more agile. At just over 2 years, he would respond to bye-bye by going to the door, or bath by climbing into wet or dry tub. No speech except occasional "hi" when greeting father. In next 6 months, some increase in agility and little else. Throughout it has been noted that changes in routine and environment have been well tolerated. Patient's mother anxious, overpermissive and oversolicitous of child. Father professional man, seems closer to patient than mother.

On our examination at age 2½, looked dull, jumped up and down a great deal, vocalized, gestured with hands. Climbed into lap of therapist, embraced him, responded to singing like small infant. Activity primitive and unorganized with no functional play. At times disregarded examiner, at other times sought and showed affection and physical contact. Neurological examination negative. Psychological examination showed atypical but retarded pattern with no area of normal functioning. On once-a-week play therapy over 4 months has shown increase in awareness of therapist, seeks and demonstrates affection, looks him in eye and smiles, but continues primitive and unorganized behavior. Responsiveness at home has increased, has used a few words and many sounds for communication, has been more manageable, and greets father warmly.

DISCUSSION OF CASE

This psychotic picture can be distinguished from schizophrenia, early infantile autism, and uncomplicated mental retardation. Early infantile autism is ruled out by virtue of

absence of early signs of communicative impairment, absence of intense insistence on sameness of environment, absence of evidence of relationship with inanimate objects in advance of social relatedness, and evidence of affective contact with human beings far beyond that usually seen in Kanner's group. As to a diagnosis of schizophrenia, there is little evidence of a real disturbance of affective contact with reality. The autism, as previously stated, is mild. Nor does the child's relationship appear "symbiotic." He shows little clinging and no unusual anxiety to separation from parents, therapist, or anyone else. Of great significance is the overall depression of functioning. His unpredictable responsiveness creates a picture not compatible with uncomplicated mental retardation but nevertheless suggestive of a real mental defect. The etiology is unclear, although the anesthesia at age 6 months deserves special consideration, and resulting brain damage would not necessarily be productive of neurological signs. But the case can be clearly distinguished from early infantile autism and schizophrenia and belongs in a separate group, such as psychosis in a mentally defective child, or psychosis of organic origin, depending on the interpretation of findings.

DISCUSSION

Three different types of psychoses of infancy and early childhood have been illustrated. It may well be that these 3 cases do indeed belong in a common group. Despert suggested, and Kanner agreed, for example, that early infantile autism represented the earliest form of schizophrenia, in which development had not progressed normally from the beginning (12, 13). It has also been proposed that mental deficiency when associated with psychoses in children, may be due to the psychotic process(21). But until our knowledge and understanding of these conditions become more definite, it is advisable that we make careful clinical distinctions based on history and examination.

Diagnostic criteria for early infantile autism were clearly defined by Kanner from the beginning(11). In our opinion, the term autistic psychosis should be used only in reference to this condition, and in accordance with the criteria originally formulated,

which involved an illness with onset almost from the beginning of life. Special emphasis should be given therefore to onset in first year of life, the early disturbances of affective perception and communication, the superior relationship to objects in comparison to social relationship, and the intense and unbending insistence on sameness. Schizophrenia begins later and is characterized primarily by a disturbance in affective contact with reality and autistic thinking (6, 7). The picture is distinguished from the former condition by history (evidence of some degree of normal development having taken place in contrast to early infantile autism) and by examination, where evidence of autistic thinking may be marked but where the degree of autistic isolation is generally milder than that seen in Kanner's group. That is, communication and affective perception are rarely quite so deeply disturbed as in Kanner's group, even though autistic thinking may be extremely marked. Also there may be a wider variety of symptoms, such as symbiotic features, possibly because development has proceeded further before onset of illness. But disturbed affective contact with reality and autistic thinking remain the outstanding features of any schizophrenic illness of this age period.

The so-called symbiotic syndrome is frequently associated with the schizophrenic child even though it may not always occur. There is a tendency to regard a schizophrenic child as being at some stated time either primarily symbiotic or primarily autistic in his defenses or symptoms, as if the one defense at a given time more or less excluded the other. Simply because Kanner's children seem to withdraw from physical contact does not mean that a child, who clings and melts into another's arms and body with seemingly little warmth or even recognition, is not autistic. Autism is not defined by the symptoms of early infantile autism. It is probable that the symbiotic child is *less* autistic than most children in Kanner's group, but he is still autistic and gives clear evidence of this, at least in terms of Bleuler's definition. Bleuler, for example, writes that "the autistic world has as much reality for the patient as the true one. . . . Frequently (patients) cannot keep the two kinds of reality separated from each other" (4). Surely this ap-

plies as much to the symbiotic picture as to Kanner's. So-called symbiosis is a manifestation different from that generally seen in Kanner's group but all the same, autistic in nature. Whether it represents a higher stage of ego development is in the opinion of the authors not established. The occurrence of symbiotic features in itself, does not, in the experience of the authors, have special prognostic significance even though making contact with the child may seem easier at first. The outlook of the symbiotic child who communicates but little, seems not much more hopeful than severe cases of early infantile autism. Those children in Kanner's group who have done well do not appear necessarily to have passed through symbiotic stages but rather simply to have emerged to some degree from their autistic isolation (9, 14). We are not convinced that an emphasis upon symbiotic features is especially helpful to clinical understanding, or that the concept can be effectively applied diagnostically.⁵

As to the question of when to consider a psychotic child as also mentally defective and to be distinguished as such, irrespective of the occurrence of autism, the following principle is suggested. Psychoses in children with generally retarded motor development or overall depression of intellectual functioning should be classified as psychoses in mentally defective children. This principle should obtain even when an atypical pattern is present but where functioning is still below normal in all areas. An atypical pattern is to be anticipated in a psychotic child, whether truly defective or not, particularly when autism is a feature, and does not rule out the possibility of a true mental defect.

The inclusion of these 3 types of syndromes in an "atypical" group is at times misleading. For one thing, it requires a very careful reading of case histories in order to decide upon the clinical entity described. To say the development is atypical is simply to say it is not typical, not average, or not normal. The number of deviations possible are after all innumerable and may encompass many kinds of pictures, not even all psy-

⁵ For an example of the difficulties involved in applying this concept diagnostically, see "Symbiotic Aspects of a Seven-Year-Old Psychotic" by Morrow, T., Jr., Loomis, E. A., Jr. (20).

chotic. It may in any event encompass any and all of the psychoses referred to in this paper.

In these several types of psychoses, there generally exists some impairment of communication. In the autistic child, this impairment may be very great. The prognostic importance of the development of a useful speech by the age of 4 or 5 in these cases has already been demonstrated (9, 14). In younger children, the history in infancy relative to early responsiveness, manner of vocalizing, and so on, may be of special significance in evaluating the picture. The schizophrenic child rarely shows communicative impairment to the same degree, and of course it does not extend as far back. In psychoses with evidence of overall mental retardation, communicative impairment may be associated with the mental defect as well as the autistic defense. The extent of communicative impairment represents one useful prognostic indicator for all these types. The usually better prognosis of the schizophrenic child as opposed to the autistic child is consistent with the lesser communicative impairment generally seen. Whatever the impairment is related to in any particular case, communicative capacity probably emerges as the most reliable single prognostic sign in evaluating these psychoses.

SUMMARY AND CONCLUSIONS

1. With the exception of degenerative and epileptic psychoses, there exists in the literature a tendency to group together psychoses of infancy and early childhood, which may represent different illness processes, or to differentiate between them in accordance with concepts which are difficult to apply clinically.

2. Autistic defenses are generally characteristic of these psychoses. But this does not justify a failure to differentiate between types which can be distinguished clinically. Such differentiation would appear advisable until knowledge concerning etiology increases.

3. It is suggested that the diagnosis of "autistic psychosis" be applied only to cases meeting Kanner's criteria of early infantile autism.

4. The diagnosis of "schizophrenic illness" should be applied to cases with onset after

age one and with a picture characterized principally by loss of affective contact with reality and autistic thinking.

5. Psychoses in children with retarded motor development, or in whom intellectual performance, although atypical for any age level, is below normal functioning in all areas, would best be classified for the present in a separate group as psychoses in mentally defective children.

6. With the exception of rarely occurring affective psychoses in this age group, and with the exception of organic and epileptic psychoses, most psychoses of infancy and early childhood will meet the criteria of one of these types. Cases characteristic of 3 types have been presented.

7. The degree of impairment of communication present in these psychoses constitutes a significant prognostic factor.

BIBLIOGRAPHY

1. Bender, L.: *Am. J. Orthopsychiat.*, **17**: 40, Jan. 1947.
2. Bender, L.: *Twenty Years of Clinical Research on Schizophrenic Children with Special Reference to Those under 6 Years of Age, in Emotional Problems of Early Childhood*, Ed.: Gerald Caplan, M. D., New York: Basic Books, Inc., 1955.
3. Beres, David: *The Psychoanalytic Study of the Child*, **11**: 164, 1956.
4. Bleuler, E.: *Dementia Praecox or The Group of Schizophrenias* (English Translation), New York: International Universities Press, 1950.
5. Bleuler, E.: *Am. J. of Insanity*, **69**: 873, 1913.
6. Despert, J. L.: *Psychiat. Quart.*, **12**: 366, 1938.
7. Despert, J. L.: *M. Clin. North America*, **31**: 680, 1947.
8. Despert, J. L.: *Differential Diagnosis Between Obsessive-Compulsive Neurosis and Schizophrenia in Children*, in Hoch and Zubin, *Psychopathology of Childhood*. New York: Grune & Stratton, 1955.
9. Eisenberg, L.: *Am. J. Psychiat.*, **112**: 607, Feb. 1956.
10. Hirschberg, J. C., and Bryant, K. N.: *A.R.N. M.D.*, **34**: 454, 1954.
11. Kanner, L.: *J. Pediatrics*, **25**: 211, 1944.
12. Kanner, L.: *Am. J. Orthopsychiat.*, **19**: 416, 1949.
13. Kanner, L.: *A.R.N.M.D.*, **34**: 451, 1954.
14. Kanner, L., and Eisenberg, L.: *Notes on the Follow-up Studies of Autistic Children*, in Hoch and Zubin, *Psychopathology of Childhood*. New York: Grune & Stratton, 1955.
15. Kaplan, S.: *Childhood Schizophrenia Round Table*, 1953, *Am. J. Orthopsychiat.*, **24**: 521, April 1954.
16. Lutz, J.: *Schweiz. Archiv*, **39**: 335, 1937.
17. Mahler, M. S.: *The Psychoanalytic Study of the Child*, **7**: 286, 1952.
18. Mahler, M. S.: *Discussion of Chapters 13-16*

in Hoch and Zubin, *Psychopathology of Childhood*. New York: Grune & Stratton, 1955.

19. Mahler, M. S., and Gosliner, B. J.: *The Psychoanalytic Study of the Child*, 10:195, 1955.

20. Morrow, T., and Loomis, E. A.: *Symbiotic Aspects of a Seven-Year-Old Psychotic*, in *Emotional Problems of Early Childhood*, Ed.: Gerald Caplan, M. D., New York: Basic Books, Inc., 1955.

21. O'Gorman, G., J.: *Ment. Sci.*, 100:934, 1954.

22. Potter, H. W.: *Am. J. Psychiat.*, 12:1253, May 1933.

DISCUSSION

JOHN A. ROSE, M.D. (Philadelphia, Pa.).—I should like to commend the efforts of Drs. Despert and Sherwin to bring organization to these problems of diagnostic thinking. The focus of the effort is twofold. An attempt is made to distinguish between severe infantile disturbance and retardation of primary nature. The other purpose is to distinguish between severe infantile disturbance in which there is early impairment of object relation and those cases in which the history is that of apparently satisfactory early object connection. It is suggested the former type of case should be categorized as autistic and the latter as childhood schizophrenia.

In a way, it is unique in the history of psychiatric diagnosis to discuss a nosological system in which schizophrenia carries a more benign prognosis than some other entity. One of the points made by the authors is that autism may be the result of constitutional susceptibility and thus less treatable. It would appear to be for this reason that Bender's criteria are rejected as too broadly inclusive; the same being true of the "atypical development" of Putnam and Beata Rank. That is, the childhood schizophrenia of Bender does not allow for psychogenesis of disorder and the atypical development of Putnam and Rank not precise enough to distinguish primary defects in the equipment of the infant.

In considering this entire attempt at better differential diagnosis between cases of severely disturbed young children, I am led to speculate that the attempt is motivated by a problem in the children's field which concerns all who work in it. The fact is that there exists a growing feeling that some of these cases are either irreversible from beginning or become so at the 4 to 6 year level. This, if true, is of great importance to our state hospital systems in its implication for future planning. Children with irreversible mental illness who will be wards of the state from 5 or 6 years of age until they die are a potentially staggering problem. Hence, any attempt to find a group of cases of severely disturbed young children who are still treatable is certainly worthwhile. It is also a matter of considerable import to those of us in community psychiatric clinics for children. Such clinics have an obligation to invest limited treatment time in the most useful way possible.

Thus, on several scores there is great justification for an adequate system of differential diagnosis.

The case examples cited suffer from a common deficit. The developmental histories were obtained retrospectively. It is our experience with these families that perceptual distortion of the actual development of the child is commonly so great as to invalidate either a favorable or unfavorable picture of the child's earlier development.

The considerable differences cited in the literature on etiology may be considered as arising out of problems in interpretation of developmental histories. There are formidable problems to be dealt with not only as to where the locus of the primary problem exists, but also in the secondary interaction affecting husband and physician. Even in clear cases of birth injury, the mother's ego needs may cause a sympathetic perceptual distortion of facts both by husband and physician. We have observed that irritable states in 2 or 3 month old infants often seem capable of producing extremely distorted views of the current symptomatology.

Some colleagues in discussion have mentioned studies in which much maternal pathology and perception distortion exist, yet no symptoms in the infant are objectively discernible.

The confusing permutations and combinations which are possible lead to a conclusion that continued investigative work will be needed to clarify the diagnostic problem. Current projects undertaken both from the anterogressive and retrospective viewpoints may furnish data of critical nature for the diagnostic process. If we know more clearly what to look for and how to look, we may succeed in obtaining more consistent developmental histories.

Currently, also, we have a professional problem in description of infant behavior ourselves. A clearly withdrawn child is readily described; it is much more difficult to describe the behavior of a child with atypical object relationship. Interpretation of behavior without inference of purpose is almost impossible. Such description probably would not be helpful even if possible.

It is our hope that current studies will reveal not only better pictures of the maternal disturbance, but also a consistently better idea of the meaning of the behavior of disturbed young children. Until our tools are better, it does not seem wise to design a classification of more precise nature than the methods of obtaining data allow.

I too accept "obsession with sameness" as a diagnostic point in these cases, and suggest it is also possibly a learned activity as well as serving as a defense against anxiety. We have seen several cases recently of young infants in which the "sameness" was inherent in the rigid routines developed by the mother as her own defense against tension; under hospital conditions the infant was much more elastic in his choices of food, toys and people than as presented in the picture obtained from his mother.

Such considerations as these move me to praise the authors for their thoughtful analysis of available data, but urge that the distinction made is not sufficiently helpful at present. I do not believe the distinction will be sustained when more data are available.

THE MISUSE OF THE DIAGNOSIS CHILDHOOD SCHIZOPHRENIA :

HILDE L. MOSSE, M.D.²

There has been an enormous increase in the diagnosis of childhood schizophrenia. We find an ever larger number of cases both in the psychoanalytic and general child psychiatric literature(1, 2, 5, 7, 8, 9, 14, 16). Few cases have been followed into adulthood(1, 7, 13), and where it is reported that the diagnosis was then confirmed, this is still open to question because of the prevalence of confused and inconsistent diagnostic criteria also in adults(3).

Schizophrenia is not a disease of childhood. Its onset is in adolescence and pre-adolescence. Studies of childhood behaviour of definite adult cases of schizophrenia(4, 19) show that they are, as a rule, model children, inconspicuous, and quite different from the cases described as childhood schizophrenics.

Child psychiatry is still in the pre-Kräpelinian stage. No valid classification of mental diseases in children has yet been worked out. For the study of schizophrenia in childhood we have to take into account the progress made since Kräpelin and Bleuler in the refinement of diagnosis. This progress has been in two main areas, in the sifting out of other diseases, and in the development of tests.

The development of tests has given a new dimension to psychiatry. We have found the Mosaic test as interpreted by Wertham(23, 25, 26) so helpful for the diagnosis of schizophrenia, that we feel no child should be diagnosed as suffering from schizophrenia without a schizophrenic Mosaic design. Some workers(6) found a 100% correlation between definitely diagnosed adult cases and their typical mosaic.

The present trend to diagnose children with severe emotional and mental symptoms as schizophrenic is scientifically wrong and has had serious practical consequences. It has filled state hospitals and schools for mental defectives. Children in trouble for many

different reasons are now likely to be so diagnosed.

We have studied 60 such cases below the age of 14 at the Lafargue Clinic and in private practice. In practically all of them the diagnosis was wrong.

Seven-year-old Bernard is representative of the many cases where unnecessary hospitalization and harmful treatment followed this wrong diagnosis. His mother took him out of the hospital and brought him to the clinic. She said: "He had only 6 shock treatments, not the full 20. He had forgotten even our dog's name when he came home, and he had known him since the dog was a puppy. It was just like he had to learn all over again. It seemed like he was in a daze most of the time." Clinical examination, tests, playgroup observation showed no evidence of schizophrenia. Our diagnostic task was made even more difficult because of the symptoms and the changes caused by ECT. It is exactly as Dr. Nolan D. C. Lewis stated: "The thing that interferes with using diagnostic intuition more than anything else is shock therapy"(15). This boy recovered with group and individual therapy.

The most pressing unsolved social problem in the United States today as far as children are concerned is that of juvenile delinquency. A child who commits a crime is now likely to be diagnosed schizophrenic and sent to a mental hospital. This puts the problem into a wrong focus, namely into the field of mental illness of unknown origin inherent in the child, instead of into the field of social pathology to which the child is reacting.

George is such a case. He came to the clinic in 1946 because of a severe reading disability and truanting from school. He was the leader of a gang of about 30 boys and feared that a member of a rival gang might stab him in school. When he came to the clinic he brought two body guards who kept watch at the entrance. His gang became involved with the killing of a policeman, and he was arrested and sent to a mental institution where he made 3 suicide attempts before his final commitment to a state hospital where he made another suicide attempt. The diagnosis was schizophrenia. He was discharged once but recommitted after an arrest for fighting while drunk. He was then sent directly to the mental hospital and not to jail because of his previous stay there.

I visited him in the hospital when he was 22 years old. I found him friendly and outgoing. There were

¹ Read at the Second International Congress For Psychiatry, Zürich, 1957.

² From the Lafargue Clinic, New York.

no delusions or hallucinations. He gave a coherent account of his past life inside and outside the hospital. He attempted suicide because he was depressed. He worried about the other boys in his gang some of whom were in jail awaiting trial for their life. He told me: "I was the baddest boy on the ward. There were boys from another club and we got to fighting. I was all confused. I heard boys hollering, screaming. You get to thinking about it when you are alone by yourself, you shouldn't have done this, you shouldn't have done that."

This is not what patients tell us after an episode of "catatonic" excitement. The doctor in charge told me he did not think that George had schizophrenia. Many boys now on the wards of this and other hospitals got into trouble because of gang membership and are not psychotic.

Our case material shows that symptoms are frequently misinterpreted. This has serious consequences for the child's entire future life.

This happened to Robert, age 9. He was sent to a mental hospital for truancy, running away from home and stealing. The diagnosis of childhood schizophrenia was based primarily on the following factors: "On occasion he thought people were following him and was compelled by some introjected body to do things like steal and stay away from home."

Here delusions of reference are implied but not proven, especially when we take into account that such a serious symptom never occurs only "on occasion." Our cases show that the so-called introjected-body-delusion is most often a fantasy and represents a conscious or unconscious rationalization for forbidden actions. Frequently children tell us: "a voice told me to hit him" or "the devil told me to kick her." The child may consciously want to show that he is not responsible for the bad things he does. Some children grow up in an environment where the devil is considered a reality, and forbidden deeds and thoughts are explained by the devil having entered the person. Some children we see have been told that spirits exist, can come to life, talk to people and influence them. Actually, Robert had run away from home because of a cruel mother and step-father. He stole money because he needed it. Our clinical examination, tests and play-group observation showed no evidence of schizophrenia. He was rehospitalized against

our advice. He was given 20 ECT. After these he became: "agitated, felt that his body had been mutilated, played with words, shouted, ran about, was overtalkative and appeared to have feelings of unreality." This iatrogenic syndrome then lead to his commitment to a state hospital.

The sequence in this case is typical. The child misbehaves in school and often, not always, also at home. He can no longer be kept in the class room. His parents are advised to take him to a hospital for observation, or they are referred to clinics, agencies or the children's court. There it is felt that the child is suffering from childhood schizophrenia, and he is sent to a hospital where the diagnosis is confirmed and he receives 20 ECT. The child may react the way Robert did and be committed to a state hospital, or the parents may take him home with or without the doctor's consent. Most of the children we have seen were then not able to function in the community. They either had to be exempted from school for some time and eventually improved with psychotherapy (if this was available to them), or they had to be recommitted soon. After a stay in the state hospital for anywhere from several months to 4 years, they are discharged with the diagnosis changed to "behaviour disorder." This change of diagnosis is so frequent that it has become the rule rather than the exception. So it happens that in an entire caseload of one social worker only one case was discharged with the original diagnosis of schizophrenia.

Some cases are sent not to state hospitals but to state schools for mental defectives. In one state school 95% of children sent to them as childhood schizophrenics turned out to be grossly organic cases, for instance encephalitis, definitely not then certifiable as childhood schizophrenia. Franz Kallman has made similar observations in his study of twins.

We had the opportunity to examine children at different stages of this sequence, either inside or outside the hospitals. Among our cases are children with psychologically caused conditions. We have searched the literature and were unable to find even one fully analyzed and definite case of schizophrenia in which the causative connection

between early or later infantile psychological trauma and the disease was really established scientifically. Children may react in a bizarre way to severe trauma but that does not mean that they then have schizophrenia or will develop it later on in life.

Our material contains organic cases such as epilepsy, epileptoid mood disorder, encephalitis, mental deficiency, endocrine disorders and developmental disturbances. We have found that even mild forms of agnosia, apraxia, aphasia, impairment of auditory perception and dyslexia may cause severe learning and behaviour disturbances and lead to the erroneous diagnosis of childhood schizophrenia. Schizophrenia is not an organic disease in that sense. We know it is a progressive disease, but we do not yet know where the schizophrenic process takes place. Wertham's conclusion in *The Brain As An Organ* is still valid (21):

On the ground of anatomical facts, there is no justification for speaking of an "organic cerebral process" in schizophrenia . . . there is, today, no histopathology of this condition. To draw from this negative statement the conclusion that of necessity schizophrenia can not be due to any organic factors, and must consequently be of psychogenic origin, would be hasty and unwise.

One of our most difficult diagnostic tasks was to differentiate cases of schizoid psychopathic personality. These have mild, chronic, non-progressive symptomatology but may have severely disturbed episodes.

Genuine paranoid delusions have not been described in children. We have observed a type of hostility which may be malignant and possibly a forerunner of delusions. This problem comes up in the very large number of cases referred to us with the chief complaints of: "Hits other children without provocation, is a menace to the safety of other children in his class." We then have to find out whether he hits other children because he is attacked by them and has to defend himself; because he is so anxious and insecure that he feels it is safer to hit first because he thinks they are going to hit him anyhow; because he imitates strong man figures he admires such as Superman; or because we are really dealing with a morbid, possibly schizophrenic suspiciousness and hostility.

One of the most important gaps in our

knowledge is that the limits of normal for children of different ages have not yet been established. In neuropathology many findings which were once called abnormal are now known to belong to the "extent of the normal" (21). We may find this to be true also in child psychiatry. How far in degree and in terms of a child's age can magic thinking go before it can be termed pathological? When should a dreamy child be diagnosed as pathologically withdrawn? Up to what age, in what type of child and to what degree is fantasy preoccupation compatible with mental health? This brings up the question of visual and auditory hallucinations. It is known that children normally have more vivid auditory and visual experiences than adults. They have to learn to distinguish fantasy from reality. Stories, especially in comic book format, on television and in the movies, are taken seriously and carried over into play, daydreams, dreams and projected into tests (17, 18, 24). During episodes of anxiety and especially before going to sleep many children experience visual, tactile and auditory fantasies which they may feel come from the outside and about whose reality they may not be quite certain. Piaget has found that until about the age of 9 a child may believe a shadow is a substance; it is therefore not surprising when a child reacts with fear when he sees shadows. The error is often made that such experiences alone are regarded as symptoms of a serious and malignant disease. The fact that most children have a positive eidetic disposition (22) has to be taken into consideration also. Several of our cases were committed on the basis of such symptoms which are really within normal limits.

John's diagnosis was based mainly on: "visual hallucinations." He described the following: "I just close my eyes and I see elephants. Sometimes when I imagine things I can see it. I have to have my eyes closed. Sometimes I see cowboys. I make myself one of them. They do whatever you want them to do. Sometimes when I can not sleep I do it. Then I'd go to sleep."

What this boy described is what Dr. Jellinek has called "spontaneous imagery" (11, 12). It is not a pathological phenomenon and seems to be easier for children to produce than for adults.

Our cases include neuroses. They bring

up the interesting problem of differentiation between schizophrenic regression and neurotic fixation. Their prognostic evaluation is made especially difficult because some adult cases of schizophrenia have neurotic traits in childhood. The Mosaic test is here particularly helpful (23, 25, 26). With its aid we can also distinguish cases of obsessive-compulsive neurosis on an affective basis with good prognosis from those malignant forms which are really symptoms of schizophrenia.

Our cases show how erroneous dogmatic thinking may lead to contradictory therapeutic procedures. Often they are dangerous for the child. At any rate, they deprive the child of constructive social and psychotherapeutic measures. In many cases anti-convulsive medication and then ECT was recommended in the same case within a period of a few weeks. Children of all ages are being subjected to lobotomies on the same basis (10).

Childhood schizophrenia is at present in the United States a fashionable and much abused diagnosis. Careful clinical study indicates that far more often than not this diagnosis is wrong. This is not only a threat to children living in a socially difficult milieu, but also hinders the progress of psychiatry as a science.

BIBLIOGRAPHY

1. Bender, Lauretta: Twenty Years of Clinical Research on Schizophrenic Children, in *Emotional Problems of Early Childhood*, ed. by Gerald Caplan. New York: Basic Books, 1955.
2. Beres, David: Ego Deviation and The Concept of Schizophrenia, *The Psychoanalytic Study of The Child*, Vol. XI. New York: International Universities Press, Inc., 1956.
3. Bleuler, Manfred: Forschungen und Begriffswandlungen in der Schizophrenielehre 1941-1950. *Fortschritte der Neurologie, Psychiatrie und ihrer Grenzgebiete* 19. Jahrgange, Heft 9/10, Sept./Oktober 1951, pp. 385-452.
4. Bowman, Karl: *Proc. A. Research Nerv. and Ment. Dis.*, 180-210, 1933.
5. Clardy, E. R.: *Psychiat. Quart.*, 25: 81, Jan. 1951.
6. Diamond, B. L., and Schmale, H. T.: *A. J. Orthopsych.*, 14: 1944.
7. Darr, George C., and Worden, F. G.: *A. J. Orthopsych.*, 21: No. 3, July, 1951.
8. Despert, J. Louise: Treatment In Child Schizophrenia. In *Specialized Techniques In Psychotherapy*, ed. by Gustav Bychowski and J. Louise Despert. New York: Basic Books, Inc., 1952.
9. Despert, J. Louise: Differential Diagnosis between Obsessive-Compulsive Neurosis and Schizophrenia in Children in *Psychopathology of Childhood*, ed. by Paul H. Hoch and Joseph Zubin. New York: Grune and Stratton, 1955.
10. Freeman and Watts: Prefrontal Lobotomy in Children. *Digest of Neurology and Psychiatry*, pp. 202-220, April 1947. Institute of Living.
11. Jellinek, Augusta: *A. J. Psychotherapy*, 3: No. 3, p. 372, July, 1949.
12. Jellinek, Augusta: Spontaneous Imagery As A Psychodiagnostic Method, *Revue de Psychologie Appliquee*, 1953.
13. Kanner, Leo and Eisenberg, Leon: Notes on the Follow-up Studies of Autistic Children in *Psychopathology of Childhood*, ed. by Paul H. Hoch and Joseph Zubin, New York: Grune and Stratton, 1955.
14. Klein, Melanie: Contributions to Psychoanalysis 1921-1945. *The Psycho-analytical Library*, ed. by Ernest Jones, M. D., No. 34. London: The Hogarth Press, 1948.
15. Lewis, Nolan D. C.: *A. J. Psychotherapy*, 3: No. 1, p. 4, Jan. 1949.
16. Mahler, Margaret S.: On Child Psychosis and Schizophrenia, *The Psychoanalytic Study of the Child*. Vol. VII, 1952.
17. Mosse, Hilde L.: Die Bedeutung Der Massenmedia Für Die Entstehung Kindlicher Neurosen *Monatsschrift für Kinderheilkunde* Band 103, Heft 2, S. 85-91, 1955.
18. Mosse, Hilde L.: *A. J. Psychotherapy*, 8: 2, p. 251, April 1954.
19. Sherman, M., and Jost, H.: *Am. J. Dis. Child.*, 65: 868, June 1943.
20. Smith, Jeanne: *Arch. of Pediatrics*, 68: 10, p. 477, Oct. 1951.
21. Wertham, Fredric: *The Brain as an Organ*, New York: The Macmillan Company, 1934.
22. Wertham, Fredric: *Arch. of Neurol. and Psych.*, 24: 809, Oct. 1930.
23. Wertham, Fredric: The Mosaic Test, in *Projective Psychology*, ed. by L. Abt and L. Bellak, New York: Alfred A. Knopf, 1950.
24. Wertham, Fredric: *Seduction of The Innocent*, New York: Rhinehart, 1954.
25. Zucker, Luise: *A. J. Psychotherapy*, 4: 3, p. 473, July 1950.
26. Zucker, Luise: *A. J. Psychotherapy*, 4: 1, p. 44, Jan. 1952.

HISTORICAL ROOTS OF PSYCHOTHERAPY¹

NOLAN D. C. LEWIS, M.D.²

If psychotherapy is to be considered as any procedure or process which changes behavior or influences an individual towards a more adequate or satisfactory adjustment to his environment or encourages peace of mind, then its roots reach back into prehistoric ages. Psychotherapy may be direct, indirect, or entirely unintentional. It may be self acquired and applied, or initiated by others unintentionally, as it must have been in the ancient days through suggestion, persuasion or by identification (or imitation) of the individual with the successful behavior of companions. If whatever occurred modified the behavior of the individual successfully, it was psychotherapy of some sort or order.

If psychotherapy signifies mental healing or attempts in this direction its realm is indeed vast. It includes hypnotism, suggestion, persuasion, education, the various so-called psychodynamic schools, vocational therapy, music therapy, religion therapy, particularly highlighted in the form of Christian Science, and the more recently developed group therapies. It is a fact that from the very beginning of medical practice, especially of psychotherapeutic practice, at least from the time of the Babylonians, the trained professional workers had lay competitors, a situation that still obtains and is growing. Freud once said, "There are many ways and means of psychotherapy. All methods are good which produce the aim of the therapy." We attempt to detect from the earliest written records a trend here and there that can be recognized as having served, or having tried to serve, the individual in some favorable modification of his life situation.

Although there is a great deal of ancient literature bearing on the field of medicine, it is probable that the greater part of it did not survive. The literature of one of the most

active and interesting eras in medical history, that is, the three centuries B. C., has reached us only in fragments.

There is much that has been lost without even a trace. An inscription found by the merest chance tells us of a doctor who wrote 256 books but not a single fragment of these books survives. Considerations such as these will serve to emphasize the need of caution in historical reconstruction based on the fragmentary evidence that we happen to possess.³

The practice of psychotherapy is always in keeping in a way with the social setting in which it occurs and Wundt's scheme of the history of culture might be used in this connection to outline the development:

1. The period of primitive man
2. The period of totemism
3. The period of gods and heroes
4. The period of humanity

One should probably assume that some sort of psychotherapy had been practised long before written history. It is known from various ancient sources that in the beginning no distinction was drawn between diseases of the body and of the mind, although special speculations on the nature of mind and thought have been in evidence since the beginning of any civilization. Certainly from the records it is safe to assume that in the childhood of medicine in Assyria, Babylonia, Egypt, India, Judea, Phoenicia, Greece, China, and in the ancient Western Hemisphere, the prevailing concept of disease was centered in some form of demoniacal influence. The physician and the priest were one and the same person as they still are in certain belated or primitive societies where exorcisms are used to drive out the evil spirits as the supposed causes of disease. The physician of today is a direct descendant of the Egyptian, Chaldean and Druidic priests.

As man progressed, the supernatural elements began gradually to give way to more clearly observed facts and history indicates that the ideas of Greek natural philosophers

¹ Read at the 113th annual meeting of The American Psychiatric Association, Chicago, Ill., May 13-17, 1957.

² N. J. Neuro-Psychiatric Institute, Princeton, N. J.

³ I. E. Drabkin, *Jour. Med. Education*, 32:286, 1957.

formed the first era of modern medicine. Their works demonstrate that they were not influenced by the gods, but searched for truth in other directions. Protagoras said,

"I can know nothing concerning the gods whether they exist or not for we are prevented from gaining such knowledge not only by obscurity of the thing itself but by the brevity of human life."

However, he did not come out too well personally since he was driven out of Athens as a reviler of gods and his books were burned in public. It has never paid to be too far ahead of your contemporaries. Chilo's "Know Thyself" inscribed in the Temple of Delphi which Socrates considered the only object worthy of man, and the maxim "Man is the measure of all things" first uttered by Protagoras seem to be a starting point in Ionian philosophy from which the historian may proceed along the trends that lead directly to modern psychotherapy. Protagoras, the Sophist who lived in the 5th century B. C. considered man to be the most helpless of all creatures, and the only weapon he has to combat the multitude of dangers confronting him is his mind.

Celsus in the Christian era advocated 2 widely divergent methods of therapy for the mentally ill. On the one hand he had a use for starving and flogging because he said those who have refused food start to eat and in some cases the memory is refreshed. On the other hand, he said that everything should be done to divert the melancholiac, and advocated music, reading aloud, swinging in a hammock, sports, and pleasant surroundings.

Coelius Aurelianus (400 A. D.) placed the patient under the best conditions of light, temperature and quiet, and recommended that everything of an exciting nature should be excluded. Of particular note are his references to tacitfulness on the part of attendants, for the avoidance of antagonisms and to the limited and cautious use of physical restraint. He thought the physician should not see the patient too frequently, lest his authority become undermined. Theatricals, entertainments, riding, walking and work were all recommended, particularly during the period of convalescence. Topics of conversation were to be such as would suit the

patient's condition. He also made the pronouncement that no philosopher had ever been able to cure completely a patient with mental trouble. Galen who contributed so much to early medicine, did very little for psychotherapy as such but worked almost entirely with the physical and drug therapies of the time.

Dream interpretation for the relief of anxieties and fears as well as for prophesy is at least 2000 years old as is found in the writings of Plutarch, the great biographer of ancient times. His reports of dream interpretations are very interesting.

Paracelsus (1493-1541) formulated a doctrine of mental disease with psychic causes and advocated body magnetism which later became mesmerism and still later hypnotism, and Spinoza, the brilliant philosopher of the 17th century, anticipated many of the concepts that Freud later discovered and developed through clinical experience, but the foundation for modern psychotherapy was laid toward the close of the 18th century by Mesmer's "magnetism." His graduation thesis from the University of Vienna in 1766 was entitled "On the Influence of the Planets on the Human Body." His views were a mixture of the known physiology and the astrology of the times. Some investigators have claimed that Mesmer really expressed ideas that he had gathered from Paracelsus and from a Scottish physician, William Maxwell.

Since I have stated that the foundation or roots of modern psychotherapy is to be found in Mesmer's pioneering ideas we shall look a little closer at what happened there; although the story is familiar to most of you, there are some points deserving of emphasis in my particular topic. Mesmer believed thoroughly in the genuineness of his discovery and after years of outstanding success he attempted to gain recognition from the Royal Medical Society and the Paris Academy of Science, but the members of the scientific committee appointed by Louis XVI in 1784 to investigate the matter reported that cures were genuine but were due to the imagination or imitation in the patients and had no scientific basis. This was exactly

Mesmer's idea, that people influence each other just as the magnet influences iron filings, that is, they either attract or repel each other. It is of some interest that the famous Lavoisier and our own Benjamin Franklin were members of this investigating committee. This scientific committee made no effort to inquire into the nature of this imagination and imitation which apparently caused cures and Mesmer died about 30 years later in obscurity. He actually laid the foundation for hypnotism and other forms of suggestion as well as other types of psychotherapy which began a century later.

Some have advocated that Mesmer was a conscious charlatan but this is doubtful. He was probably given to a bit of showmanship and dramatic flairs, a tendency from which some of our own contemporaries are not entirely free, but withal Mesmer believed in his theories and in their efficacy in therapy. The Marquis de Puységur first discovered somnambulism. He noticed that some subjects spoke and acted during the hypnotic sleep as if they were aware of what they were doing but retained no memory of their actions. He said, "They have acted as if in a dream." In 1815 a Portuguese, Abbi Faria, showed that certain individuals are so sensitive and impressionable that they go to sleep upon a positive command to do so, thus demonstrating that Mesmer's manual or magnetic contact was not always necessary. A number of English surgeons used Mesmer's technique in practice and one of these, James Braid, called the phenomenon "hypnotism," since sleep was the most important factor rather than Mesmer's magnetic fluid theory.

Johann Christian Reil (1759-1813), professor first at Halle then at Berlin, in addition to demonstrating that parts of the brain controlled certain parts of the body, in 1803 wrote a book, *Rapsodiceen*, on mental treatment (psychotherapy) and in 1805 founded the first journal for mental disorders. Jean E. D. Esquirol (1772-1840), the successor of Pmel at the Salpêtrière in Paris, organized 10 mental hospitals. He advocated the utilization of the colony system for the mentally ill and a boarding out system for suitable mental patients requiring prolonged super-

vision. In 1821 he visited the celebrated village of Gheel in Belgium where for centuries it had been the custom to board out patients but where no physician had previously investigated these possibilities. Subsequently by his initiative in 1832 the first colony for the mentally disordered was organized in the suburbs of Paris. It was called the "Farm of Saint Anne," and later it became famous and served as a model along these lines.

The first systematic reactions against a mechanistic and static attitude in psychological medicine developed in France where interests in purely mental phenomena were not considered as a regression into medieval superstitions. In Nancy, Bernheim (1840-1919) and Liébault (1823-1904) developed a center for research in hypnotic phenomena. The former published his book *Hypnotism, Suggestion and Psychotherapy* in 1891 which represented the scientific attitude and application of hypnotism. He, with Liébault, demonstrated the phenomenon as due to suggestion for which verbal stimuli could be substituted for sensory stimuli.

Although Charcot the famous neurologist had paved the way for modern directly applied psychotherapy, previous to 1900 there were no physicians specializing in psychotherapy and calling themselves psychotherapists as far as I can find. The word "psychotherapy" as such was not generally known or at least it did not appear in such psychiatric works as Clouston, Weygant, Bianchi or White.

The English translation of Dubois' *The Psychic Treatment of Nervous Disorders* was published in 1905 by S. E. Jelliffe and W. A. White. Dubois was not in favor of hypnosis. He said,

The psychotherapy, which I call rational, has no need of this sort of preparatory narcosis or hypnosis, or of this hypersuggestibility that is itself suggested. It is not addressed to an impressionable polygon, but simply to the mind and the reason of the subject the psychic therapy is indicated in all the affections in which one recognizes the influence of mental ideas, and they are legion.

Dubois was also opposed to re-education since it involved the influence of authority, suggestion and suggestibility, all of which he asserted were of only temporary effect, and

were probably detrimental in the long run. Therefore he says,

I recognize but one means of education, persuasion by means of proof by demonstration, by logical induction and by reason which touches the heart. Of the proof of this last means there are all degrees. Precise, but cold proof dispenses with every emotional outlet. It appeals only to reason.

Dubois rejected hypnotism because of authoritative aspects while Freud ceased practicing it mainly on the basis that it did not afford insight into the origin and meaning of the symptoms.

It is usually conceded that the psychology of hypnotism and other forms of suggestion was unknown until Ferenczi explained it on the basis of a father-child relationship. If the child has confidence in the father, or a father surrogate, he will obey what is told him. Bernheim, who was an outstanding contributor in the field of hypnotism and suggestion, pointed out that our whole mental life is filled with the phenomena of suggestion. We influence others and they influence us constantly by this means.

The famous Pinel, contemporary of Mesmer, advocated "moral treatment" which was a form of psychotherapy adopted by many of the psychiatrists of the times. From the descriptions, apparently what was known as "moral treatment" was in effect comparable in several respects to modern "total push" procedures since it included psychotherapy, occupational therapy, and recreational therapy. It would seem that the founders of American psychiatry, particularly Pliny Earl who described the moral treatment at the Bloomingdale Hospital in 1845, and Amariah Brigham the superintendent of the Utica State Hospital in New York, who defined the treatment in 1847, from their descriptions were making active applications of psychotherapy along with the various diversions and recreations, lectures, etc. that were afforded the patients. Isaac Ray was also a skilled moral therapist who pointed out the advantages of the moral therapy procedures. One of Earl's favorite means of treatment was formal instruction including various lectures and school exercises in natural philosophy, chemistry, physiology, astronomy, physical, intellectual and moral beauty;

poetry, history, etc. to influence the mind. The descriptions of these lectures reminds one of group therapy sessions. They were delivered in the evening and were often attended by as many as 70 patients.

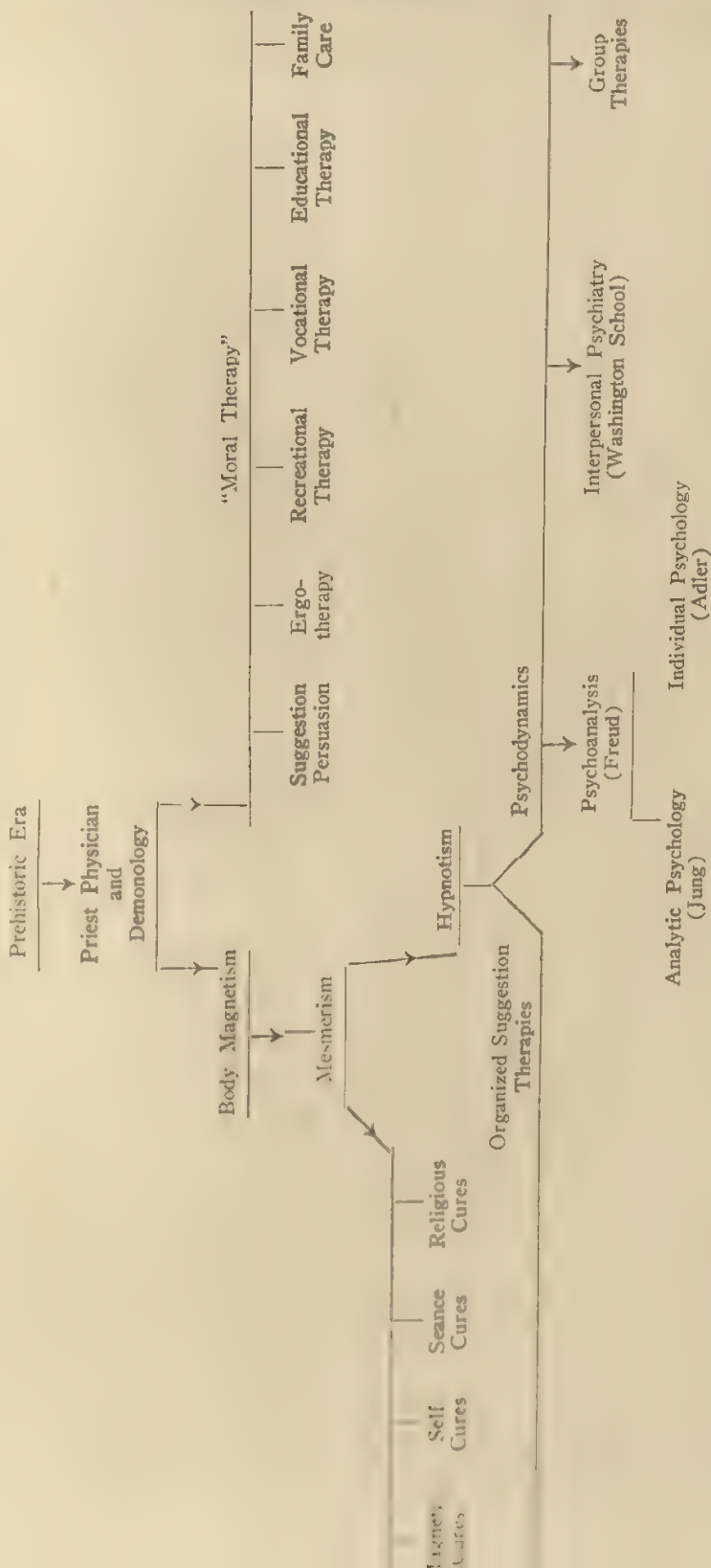
In order to bring the fragments of the origin and growth of psychotherapy into a concise picture, I would say in summary that out of prehistoric times there gradually developed the priest-physician whose activities often involved what became known as demonology. From this now somewhat obscure and diffuse mass evolved 2 trends, namely, bodily magnetism, and the roots of what was later called moral therapy. These were not clearly separate and distinct any more than their derivatives are at the present time but they overlapped and combined in various ways and settings.

Bodily magnetism became mesmerism from which has stemmed directly the organized suggestive therapies and hypnotism which not only is still practiced actively but which fathered and stimulated the creation of psychodynamics as expressed in psychoanalysis (Freud), analytical psychology (Jung), individual psychology (Adler), interpersonal psychiatry (Washington School) and the group therapies.

Not only is modern hypnotism a direct residue of mesmerism but so are: 1. magnetic cures—magnetic belts, Weltmerism, magic charms, etc.; 2. Self cures: Coueism, autosuggestion, "will training," etc.; 3. seance cures: quasi religious and semi-mystical cults; 4. religious cures: Christian Science (a direct offshoot from Mesmer by a disciple Phineas Quimby through Mary Baker Eddy).

The root that one might call moral therapy through the many years has branched into suggestion, persuasion, explanation, ergotherapy, vocational therapy, the various recreational and educational programs, family care and several others that could be mentioned. However, in keeping within the time at our disposal I will leave you with the hope that you will find in this brief sketch the apparent historical roots and some high spots in the course of the growth of psychotherapy.

SCHEME OF HISTORICAL DEVELOPMENT OF PSYCHIATRY



SOCIAL ASPECTS OF PSYCHOTHERAPY¹

FREDRICK C. REDLICH, M.D.²

Research on the relationship of psychiatric treatment to social class by a team of sociologists and psychiatrists at Yale University (2, 7) established that patients in the different social classes of the community receive different psychiatric treatment. The relationship of class to treatment is very definite and stronger than the relationship of diagnostic categories to types of treatment. There are marked differences in 1. referral to treatment, 2. types of treatment, 3. duration of treatment, 4. type of agency and psychiatrist administering treatment, and 5. efforts to rehabilitate the patient. Focusing on psychotherapy, we found that intensive and dynamically oriented psychotherapy is almost absent in the lower classes; this does not mean that such therapy in the lower classes is not possible, it only means that, at least for social and economic reasons, it is carried out rarely and inefficiently. The most general explanation for this phenomenon is difficulty in communication between lower class patients and psychiatrists. In examining this problem further, our attention was directed to a deep split in the practice of psychiatry in our community (6). Although we examined only practice patterns in our community, we believe that careful extrapolation of our findings to other communities may be justified.

We refer to the two practice groups in psychiatry as the analytic-psychological, or A & P group, and the directive-organic, or D & O group. The latter group is often referred to as the eclectic group—a term which we, for various reasons, do not use. Few practitioners are true eclectics, *i.e.* persons who do not adhere to any school of thought and borrow from all schools. There are great and independent minds who do not fall into any group—we prefer to speak of them as individualists—but the great majority of

psychiatrists belong to one camp or the other; exceptions are also some workers in the psychosomatic field. This split, we hope, will not last forever, but it exists in mid-century psychiatry in the United States and Canada. We also think that the division into A & P and D & O psychiatrists is more significant than a division into private practitioners and psychiatrists working in hospitals, clinics, administrative and academic positions, although we have noticed that the group of private practitioners of psychiatry has become the group with the highest prestige in the field.

Our division is based on criteria of practice, including its underlying theory, and on the psychiatrist's training. The A & P group essentially practices so-called dynamic psychotherapy and psychoanalysis; its practices are based on current psychoanalytic theories. The emphasis in therapy is on gaining insight into unconscious forces, strengthening the ego through such insight, and enabling the patient to abandon irrational and maladjusted behavior. The techniques are analytic and not directive or manipulative. If directive or manipulative procedures are carried out, they are supposed to be based on analytic insight of the therapist into the patient's ego weakness which requires temporary support, direction and manipulation. The "personality" of the therapist is supposed to be less important for the treatment process than the technique. The approach is almost entirely psychological. Organic methods of diagnosis, such as physical examination, medical and laboratory procedures, are extraneous to it and are, if necessary, carried out by other specialists. Although these A & P psychiatrists belong to a number of different professional organizations—there are about a half-dozen of them—often opposing each other on various theoretical and practical issues, they present a group with a definite ideological uniformity and also with considerable similarity in their practice patterns. The practitioners of this group consist of psychoanalysts of various schools, and of those who have had partial training and

¹ Read at the 113th annual meeting of The American Psychiatric Association, Chicago, Ill. May 13-17, 1957.

² Professor and Chairman of the Department of Psychiatry, Yale University School of Medicine, New Haven, Conn.

experience in analytic theory and practice; the latter being considered, and amazingly enough considering themselves, second class citizens within this particular camp. There are also wide differences in participation and devotion to research and teaching.

The D & O group is even more heterogeneous, ranging from practitioners who employ directive methods of psychotherapy such as reassurance, persuasion, suggestion, and support reinforced by advice and occasional tranquilizing or excitatory drugs, to those who rely primarily on various forms of organic treatment such as drugs, shock therapy, and psychosurgery. These practitioners have a definite organic orientation, carrying out physical and neurological examinations and medical procedures, such as blood tests, lumbar punctures, etc. Many of their explanations—to themselves and to their patients—and much of their research is couched in terms of organic medical knowledge. Actually, much organic research is not carried out by D & O practitioners, but by basic scientists. To a certain degree, this is also true for basic research in the analytic psychological field. The directive methods of psychotherapy of the D & O group are based more on so-called common sense, clinical experience, and the assumption of an authoritarian professional role than on the uncommon sense of scientific psychological theory. To a certain extent, they are guided by biological theory, although most of their therapies are crude, empirical methods such as shock treatment and lobotomy. The success of their maneuvers—and they can be quite successful—often depends more on the personality of the therapist than on the technique. This group is socially closer to the core of the medical profession in their allegiances and associations, in their professional interests and also in their training, which naturally favors the biological sciences and looks to them for guidance and progress. Davidson(1), in his interesting discussion of economics of psychiatric practice, pointed to the fact that certain psychiatric groups will make house calls, give "courtesy" discounts to colleagues, and see emergencies, which many A & P practitioners will not do. There are also a number of other social characteristics of

these two groups, which Hollinghead and I have listed in our forthcoming book(2). I do not claim to be entirely objective in my appraisal of the two groups, although I am trying to take a neutral position. My sympathies are with the A & P group in spite of my appreciation of the need for treatment and particularly for research in the organic field.

It is my impression that the existence of a strong A & P group is one of the outstanding characteristics of American psychiatry. There are also other characteristics, as Lidz and Lidz(5), Ruesch and Bateson(8), Whitehorn(9), Knoepfel and Redlich(3), and others have reported. The relative importance of dynamic psychiatry, however, is striking and I will devote the rest of this paper to a discussion of this particular feature of American psychiatry in relation to the culture of our country. Let me make reservations before I continue: the first reservation is that in speaking of United States culture in this particular context, I am speaking of middle and upper class culture in large metropolitan areas, particularly on the Eastern Seaboard, the West Coast and the Midwest. The second reservation is a limitation of my discussion to dynamic psychiatry and the influence of psychoanalysis on this type of psychiatry. I will not discuss the much broader topic of why psychoanalysis has flourished in this country and influenced many areas of its cultural life. The question arises now why psychoanalysis has made such an impact on American psychiatry that it has led, in comparison with other countries, to the evolution and striking growth of a special type of psychiatry, first spoken of as psychoanalytic and later as dynamic psychiatry. To answer that this happened because a large number of Continental psychoanalysts, fleeing from dictatorship, found refuge on the shores of this country would be begging the question. Certainly, able and well-informed refugees in other fields of art and science have contributed to the culture of the host country, but they have not gained such widespread scientific and social importance. To answer that American scientists, practitioners, and the American public in general have accepted analysis because of their superior grasp of the pertinent questions would hardly do jus-

tice to the intelligence and integrity of the expert and intelligentsia outside of the United States. Actually, this type of argumentation—only in reverse—has been presented by some European critics: that Americans are gullible and uncritical and accept psychoanalysis without any good evidence. I believe that the answer is more likely to be found in certain peculiarities of American culture, and particularly the culture of its upper classes, which may explain the affinity of United States cultural values to psychodynamic thought. Underlying my thesis is the assumption that no culture can resist for a long time the impact of unassailable scientific evidence; however, if scientific data are of a low order of certainty cultural conditions will help or deter the acceptance of scientific systems and practices which are based on them. About the relative acceptance of dynamic psychiatry in this country, I will, in the absence of empirical research on this subject, proceed to speculate.

The first hunch I offer is that the American culture values rationality and, therefore, strongly believes in science. It accepts a "Science of Man" which endeavors more than anything else to replace the irrational with the rational. In general, Americans try to "face things squarely" and claim to believe in reason. To be "adjusted," as Ruesch and Bateson have pointed out, is very important in this culture. The second reason for the acceptance of dynamic psychiatry is its emphasis on development and growth. Anglo-Saxon culture, and American culture in particular, is a child-loving culture with a pronounced appreciation and esteem of children, in contrast to Latin and Germanic countries where the prevalent attitude is more authoritarian and favors the appreciation of the finished product, the grown-up. A science which optimistically emphasizes the importance of growth and the potential for development is likely to flower in a young pioneering culture of "self-made men." In connection with this, we might mention that a psychiatric approach which emphasizes the importance of heredity, of race, of biological characteristics, is less likely to develop in this country. The third reason is the emphasis on the individual's rights and privileges. Psychoanalytic psychiatry is basically a sys-

tem of thought oriented about the individual. It recognizes that each patient is different from others and considers the rights of the individual patient more than the prerogatives of any collective group to which the patient belongs. It is the individual who is not rugged and also the individual who cannot or does not wish to be identified readily with powerful and established groups who often seeks and needs the help of dynamic psychiatry more than others. It is the individual who is caught up in the cross-currents of United States melting pot with its strong social mobility and rapid changes. In this type of social setting, dissatisfaction with one's self-realization, and self-conception of being neurotic are bound to occur more frequently than in stable and unchanging societies. In such a culture need for the type of intervention we have labeled "dynamic psychotherapy" and "psychoanalysis" is bound to be expressed. The dynamic psychiatrist (and actually most psychiatrists) is put into the role of a sage and friend who is supposed to provide guidance based on science rather than belief. One might also say that this culture is avid for sages and friends, probably because they are rare. There is also an implicit obligation in dynamic psychiatry to undo any wrongs which were inflicted upon the patient—as an infant, as a child—when he was helpless and could not defend himself nor determine his own fate. This sense of social justice, inherent in Judeo-Christian tradition and well embodied in the American culture, is one of the noblest and most appealing values underlying psychodynamic theory and practice. There are no words which can convey better the metaphysical basis of psychodynamic theory and practice than the words of the Declaration of Independence: "... that all men are created equal; that they are endowed by their Creator with certain inalienable rights; that among these are life, liberty, and the pursuit of happiness." The fourth reason is the avowed purpose of psychodynamic psychiatry to recognize and eliminate irrational fear. A strong intolerance for pain and fear are quite characteristic of American living; Americans are also quite prone to admit and to express pain and fear. During times of war, a comparison of soldiers of various

sons bore this out quite clearly. Present American culture, in spite of the Puritanic heritage and possibly as a reaction to it, is by no means a Spartan one and powerful institutions in our society serve the purpose of eliminating pain, fear, and loneliness, and endeavor to make life comfortable and soft. To a certain extent, dynamic psychiatry may serve such a hedonistic trend. The last reason is mentioned by Lasswell (4), who thinks that psychoanalytic thought has been so avidly accepted in the United States because it has offered some guidance in what Sorokin called the sexual revolution of this country. Guilt over sexual activity in a country with strong puritanic tradition has been intense, and dynamic psychiatry offers some hope—based on scientific discovery rather than belief—to reconcile desire and conscience and to alleviate guilt, anxiety, and frustration. This particular function of dynamic psychiatry and its mother discipline, psychoanalysis, has often been misunderstood. Psychoanalysis and dynamic psychiatry have been accused by some adversaries of advocating license and indulgence. Nothing in psychoanalytic and psychodynamic teaching can be construed to permit such interpretation; Freud was an austere man who abhorred lack of discipline. Although he pointed very clearly to the primitive sexual and aggressive instincts which have such a profound influence on human behavior and make men seem to be worse than was commonly assumed, he also realized that man is much better than he seems to be. In connection with the importance of modern dynamic psychiatry for a proper orientation in sexual matters, we might add that both the "sex problem" in the United States and the preoccupation of American psychoanalysis and dynamic psychiatry with sex, have changed greatly. Today, the important theoretical and practical interests of psychoanalysis and dynamic psychiatry are the genesis and function of the ego, the problem of anxiety, conflicts with aggressive and dependency needs, and the defense mechanisms, and not only what has been referred to as the older "Id psychology," largely preoccupied with the vicissitudes of the sex drive. We might add, however, to our observations that psycho-

analysis and dynamic psychiatry are less likely to flourish in a culture which has less guilt over sex, aggression, and dependency—either because behavior is freer and not under very severe controls, or because there has been a chance for better sublimation for individuals and groups.

In addition to the above considerations, we feel that psychoanalysis needs a tolerant and permissive culture for its development. It will not grow in a totalitarian or dogmatic culture. It never existed for any length of time under dictatorships, in societies with rigid caste systems and strictly defined social obligations, and it does not do well in subcultures with strong and stern doctrines. Recently, the Catholic and Protestant Fundamentalist opposition to psychoanalysis and dynamic psychiatry have become less formidable, but there is still inherent antagonism. Although psychodynamic psychiatry professes specifically *NOT* to have an explicit value system, it threatens the strict religious and political dogmas of other systems. It seems to do this by its implicit values rather than by explicit statement. Like other great intellectual movements, its spirit is revolutionary, even if most of its disciples—today—are conservative citizens. Sigmund Freud—whom Ernest Jones calls a revolutionary genius—furnished considerable intellectual ammunition to destroy our most carefully guarded shibboleths; however, Freud did not go beyond a statement of fact; being a true analyst, he was very cautious in his recommendations.

There is one additional feature of an economic nature which deserves mention. Treatment by methods of dynamic psychiatry is expensive for the individual patient and it takes a wealthy country to support this type of practice. To my knowledge, the United States is the only country where many dynamic psychotherapists earn a comfortable living and enjoy a rather high degree of social prestige. It is undoubtedly the country whose citizens are most willing and able to spend public and private money on behavioral therapies. I believe I should mention—after pointing to the reasons for cultural acceptance of psychodynamic psychiatry—two features of dynamic psychiatry and psychoanalysis which run counter to our cul-

ture. One trait—which has bothered me considerably—is a tendency to be dogmatic in writing and practice, and to accept too easily the doctrinaire teachings; there is reason to believe that this trait will be overcome. The second point was referred to at the beginning of this paper: unfortunately, acceptance of a basic science does not mean implementation of a practice. Affinity of psychoanalytic ideas to cultural values of this country did not ensue in the wide-spread practice of analysis. Psychoanalytic therapy, largely for socio-economic reasons, is restricted to a very small segment of the population. Will this ever change without training a less expensive therapist or supplying public funds for such treatment or possibly discovering more economical methods of treatment?

To paint a picture of psychoanalytic and psychodynamic psychiatry thriving without challenge or criticism in the United States culture would be wrong. As elsewhere in the world, there is considerable opposition and resistance to psychodynamic theory: some of it critical and constructive, much of it more vociferous than informed. Dynamic and psychoanalytic psychiatrists have often been over-sensitive and unnecessarily defensive to such criticism and have stayed apart from the centers of learning and thinking where free discussion—*sine ira cum studio*—may take place. When the memory of past hurts becomes dim, the group may have less need to huddle together to protect the tiny flame of progress. Will psychoanalysis have

an increasing effect on theory and application of education and the social sciences, and psychiatry turn once more to the biological sciences and therapy? Or, will in due time, as we hope, the various psychiatric schools and factions mature and disappear to make place for one scientific psychiatry? Is this expression of hope just a pipe-dream? Maybe—but I think there is some beginning evidence this wish will come true.

BIBLIOGRAPHY

1. Davidson, Henry. The Structure of Private Practice in Psychiatry. *Am. J. Psychiat.*, 113: 41, July, 1956.
2. Hollingshead, A. B., and Redlich, F. C. Social Class and Mental Illness. New York: John Wiley and Sons, 1958.
3. Knoepfel, H., and Redlich, F. C. Psychiatrische Ausbildung in U.S.A. *Psyche*, 7: 67, 1953.
4. Lasswell, H. Impact of psychoanalytic thinking on the social sciences. In: The State of the Social Sciences, ed. L. D. White, Univ. of Chicago Press, 1956, pp. 84-115.
5. Lidz, R. W., and Lidz, T. Eine Interpretation der grundideen der Amerikanischem Psychiatrie. *Nervenarzt*, 21: 490, 1950.
6. MacIver, J., Redlich, F. C., and Hollingshead, A. B. Patterns of Psychiatric Practice. (Unpublished paper.)
7. Myers, J. K., and Roberts, B. H. Social Class, Family Dynamics and Mental Illness. New York: John Wiley and Sons, 1958.
8. Ruesch, J., and Bateson, G. Communication: The Social Matrix of Society. New York: W. W. Norton, 1951.
9. Whitehorn, J. American Psychiatry. (Unpublished paper.) Read at Annual Meeting, *Am. Psychiat. Assn.*, Chicago, 1956.

SOME GUIDING CONCEPTS IN DYNAMIC PSYCHOTHERAPY

OSKAR DIETHELM, M. D.¹

The characteristic of dynamic psychotherapy, as presented in this discussion, is that psychotherapy must be guided by current and past psychopathologic findings, with the technical procedures adjustable to the psychopathologic changes. In current thinking, psychopathology includes the two inseparably linked aspects of the overt and the covert. The overt data are directly observable and describable, including symptoms and dynamic factors. The covert data include dynamic factors which are not directly recognizable or even demonstrable. Most of us would apply to them the concept of the unconscious which, however, other psychiatrists and psychologists might reject. This theoretical difference should not have an influence on the therapeutic procedures. The adjective "dynamic" emphasizes the dynamic aspect which is inherent in psychopathology and the dynamic aspect of the therapeutic procedure. All factors which have dynamic significance in psychopathologic reactions or in the well-functioning of a person demand attention in treatment whether they be physiologic, psychologic, social, or cultural. However, their therapeutic significance depends on the constellation with other factors, the period in the person's life during which they occur, and the degree of their flexibility. These introductory statements will be recognized in the discussion of some concepts which are applied in psychotherapy.

Among the basic concepts of psychopathology might be mentioned the ready changeability of psychopathologic manifestations and their subjective coloring. The meaning of symptoms and dynamic factors varies according to the individual and within his life. Every person has his orientation in a given time and place and situation, and this needs to be investigated and its meaning established. The need for critical evaluation and

reevaluation of findings is well recognized in the treatment of children and adolescents and of psychopathologically severely disturbed patients. It is not sufficiently recognized in the intensive treatment of psychoneurotic and minor personality problems, and this error may lead to psychopathologic complications or a therapeutic stalemate which could have been avoided.

Insufficient awareness of social implications and the exclusion of relatives from contact with the therapist may lead to hardships which could be avoided without impeding, or perhaps even favoring, the therapeutic progress. While going over my notes on a psychoneurotic patient who was treated ambulatorily over a period longer than a year, with very good therapeutic results sustained for many years, I found that I had completely and deliberately avoided contact with the marital partner. As is evident from the patient's material, a devoted wife suffered considerably from bewilderment and anxieties because of the changes in the patient's behavior during this long period of treatment. Had there been periodic interviews with the wife, I should have been able to alleviate her unnecessary anxieties without interference of the patient's treatment. This type of mistake is usually avoided in the treatment of behavioristically disturbed patients, especially when psychotherapy is carried out in a hospital which is psychotherapeutically well oriented, but may occur readily in a busy ambulatory practice.

Psychotherapy cannot be restricted to investigation and change of psychodynamic factors but should concern itself with all types of dynamic factors, including physical, family, and socio-economic aspects. The desire to carry out a procedure limited essentially to the psychodynamic aspects of the illness may appeal to one's scientific needs and to theoretical demands, but it will rarely be the best psychotherapy.

Dynamic psychotherapy must accept our limitation of etiologic knowledge and the changing of theories with the progress of

¹ Read at the 113th annual meeting of The American Psychiatric Association, Chicago, Ill., May 13-17, 1957.

² Department of Psychiatry, Cornell University Medical College and The New York Hospital, 525 East 68th St., New York 21, N. Y.

psychiatry, including psychopathology, and of medicine in a constantly changing culture. In the history of medicine there has always been changing dominance of causal or teleological theories influencing medical treatment. We also can see a changing emphasis on the treatment of illnesses and their phases or of the patient as a person, of stress on influencing primarily the person or his environment, and on the psychologic or physical means of therapy. The therapist cannot escape the influence of the period in which he lives and its effect on his experience and growth as an individual. However, he must be aware of the influences and bring them into critical accord with the therapy he plans to practice. Such an attitude will prevent him from having goals which are too limited or too far-reaching and from focusing almost exclusively on conscious factors and material or on the exploration of unconscious dynamics.

It has become increasingly accepted that insight into the dynamics of a psychiatric disorder and an understanding of desirable adjustments are highly desirable goals for the therapist to obtain for guidance in therapy. The same need does not apply to the patient. A limited insight is always therapeutically desirable but frequently not possible. Fortunately the therapeutic results rarely depend on the insight obtained. This fact is not surprising when we consider the many and varying significant psychologic and psychopathologic actions which contribute to healing. The therapeutic stress on insight is linked to the high value which in our culture is placed on intellectual functions and to insufficient evaluation of emotional, biological, and social factors—a bias in favor of intelligence which many protagonists of the importance of insight would deny indignantly.

The study of the individual and of his development in the world in which he lives is of basic importance to dynamic psychotherapy. The significance of dynamic events in childhood can still be recognized in psychopathologic manifestations in later life. The social relations in the present are linked closely to those in childhood. The desirability of investigating such dynamic factors in the years over 50 has often been demon-

strated. However, how far one should push and how the material elicited is to be evaluated depend on many factors. In the adolescent group, for example, anxiety-connected material may bring forth intense anxiety which in turn may lead to marked difficulty in concentration and occasional vagueness of concept formation, or hostile resentment with projections, which become a severe impediment therapeutically or may cause the psychiatrist to make an erroneous diagnosis of schizophrenic illness and change the treatment drastically. A change to a therapeutic approach which considers the alleviation of anxiety essential and a utilization of resources which are available despite the thinking disorder usually leads to a fast improvement of these disturbing symptoms. Afterwards, further dynamic investigation becomes possible if one is on the lookout for early danger signals and is able to evaluate the intensity of related anxiety. On the other hand, in elderly persons with unrecognized early cerebral arteriosclerosis, anxiety may lead to an organic type of thinking disorder which may be persistent. In such cases, a change of approach and goals is necessary.

An important point is that emotions have a different impact not only in intensity but also in regard to the phase of personality development in which they occur. Their meaning varies and their psychopathologic influence and expression differ. These facts must be considered in treatment, and the types of emotions and their meaning should be analyzed. Further knowledge will affect our theoretical formulation of the relationship of emotions to personality development.

Applying this general discussion to psychotherapeutic technique, I wish to mention first the desirability of considering which analytic procedure would best fit the psychopathologic problems present, including the patient's personality in his life setting. To be considered are duration and frequency of the therapeutic sessions, more active or passive participation of the therapist, and need for interpretations, guidance, and advice. The choice of terminology may reveal the therapist's conscious or unconscious attitude to the patient. Therapeutic interview, for example, has a different meaning than review or conversation. Elicitation of dynamics is

not the same as exploration. Any one of these techniques is desirable in specific situations, none of them in all.

The relationship between the therapist and patient has received much attention, and transference relationship and transference neurosis are recognized as valuable procedures. Less is known about indications, contraindications, and need for changes in procedures during treatment. In any therapeutic relationship the physician with his prestige, his unavoidable assertions on procedures and their meanings, and his personal life, exerts a strong influence on the patient. These factors are unavoidable and may be minimized or utilized by the patient's psychopathologically determined needs or the physician's conscious or unconscious motivations. In some conditions, resistances should be analyzed when they occur; in others, they should be dealt with indirectly, *e.g.*, in schizophrenic negativism or paranoid defensive reactions, expressed in aversion to the physician or to therapeutic influences. Provoking resistance should be evaluated critically.

The meaning of the closeness of two persons, where there is complete or partial exclusion of outsiders and where desirable and undesirable dynamic factors are enhanced, is little understood or therapeutically utilized. One speaks readily of the anxiety which this closeness may cause in some reserved, aloof, or schizophrenic patients. This explanation is insufficient and therapeutically undesirable because of the complexity of the situation which must be investigated. Based on careful consideration, the therapist should evaluate the desirability of an exclusive relationship with the patient or of inclusion of other pertinent people. The current tendency of psychiatrists to avoid active participation by consultants and their repeated direct contact with the patient under treatment deserves critical scrutiny. Experience in teaching hospitals emphasizes that the value or the detrimental effect of the actively participating consultant depends more on the technical procedure and on the psychopathologic condition than on anything else. My own attitude is that the consultant can be a constructive factor in treatment without interfering with the effectiveness of the therapist if he is willing to avoid assuming an active role.

The psychoanalytic concept of working through is important if applied judiciously and with a willingness to curtail or prevent working through when psychopathologic changes or general therapeutic consideration make this change desirable or necessary. Emotions and life experience may be kept stirred up while actual working through is impossible. Much repetition may prove to be undesirable, and decentralization and desensitization should be chosen as more effective tools. By decentralization is meant a procedure which makes the patient aware of the fact that he has treated a certain experience or a human relationship or a limited set of dynamic factors as the nucleus of his difficulties and that they have to be re-studied and re-attacked until solved. It is worthwhile to remember that such over-valuing is well known in many psychopathologic conditions, especially in paranoid reactions. It is therefore to be expected that the working through would fail as a therapeutic tool in paranoid and paranoid reactions, and in the related psychopathologic reactions which may occur in intense resentment, anxiety, and insecurity.

The possibility of undesirable, repetitious working through is illustrated by the case of a 42-year old married woman who suffered from a transient paranoid episode. In the convalescent psychotherapeutic phase, her frequent abandonment in childhood by her parents was constructively analyzed. Two months later, her parents who had come to her aid during her illness left her home on short notice. The patient felt "painfully depressed." An analysis of the meaning of "painfully depressed" revealed the present intense emotional experience in its complexity and the corresponding childhood reactions without bringing out essentially new aspects. The therapy was therefore directed toward attaining the ability to accept her parents as they were then and had been, and to rely on a husband who although unsatisfactory in many ways was able to offer a special type of reliable strength.

There are emotional reactions which, in some psychopathologic settings, may be prolonged or intensified by attempts at working through. Outstanding among them may be resentment and sexual unrest. The physician's clinical judgment will enable him to decide at various phases of treatment whether to continue to have the patient work through these reactions or whether to urge

him to tolerate and disregard them and turn his attention in other directions of analysis.

The goals of psychotherapy as they are presented in the literature of the last few years seem to me to be largely acceptable except that I would more definitely stress the need for clear guidance by the individual psychopathologic conditions and the usable assets. It is important to estimate realistically what assets are therapeutically usable, or not available, or even detrimental. With regard to psychopathologic factors, there is now a willingness to accept the possibility of their persistence being more desirable than their removal. On the other hand, there has been a disturbing readiness to accept such a limitation without careful and prolonged study of other possibilities. This tendency can be seen in purely speculative statements that the removal of certain physiologic pathology (*e.g.*, migraine or skin disease) would lead to depressions which could not be helped or to disorganizing illnesses. In many patients, the essential goal of therapy is tolerance to what cannot be changed within himself or in the environment. Tolerance to one's limitations may, for example, be important when striving for life goals leads to emotional difficulties because of an unchangeable discrepancy between inadequacies and desired goals. The utilization of the time factor in tolerance and desensitization can be important. In other patients, the goal can be reached only if one's therapeutic activity becomes directed at achieving a synthesis as an outcome of analysis where a spontaneous synthesis does not occur. The therapist must then utilize the positive factors as they are found and are able to be utilized. He may assist in creating opportunities. In others, the goal is to help the patient to obtain purpose and meaning in life and to improve his relationship to his environment, strengthening his standards, and clarifying his goals. The development of self-control may be the most desired outcome of treatment in many types of psychopathologic disorders.

A therapist needs vision of what should and can be reached. During the course of treatment his imagination and experience will permit him to link analysis of motivation to the possible outcome whenever this active

type of therapy becomes indicated. He will try to recognize foreseeable life situations and pathologic reactions which might be detrimental and he will also induce the patient to apply his abilities to his daily life.

Psychotherapy must concern itself with the patient's mode of living while under treatment, and later. The so-called routine which a physician outlines is especially important in long-term therapy outside of a hospital. The balance of work and suitable recreation, with acceptable attention to one's physical needs (sleep, food, alcoholic beverages, sexual activities, smoking, drugs) is the essence of everyone's mode of living. The presence of psychopathologic symptoms, such as intense emotions with thinking difficulties, may make temporary or long-term modifications in the patient's mode of living imperative. In some patients, interference or persistent active attempts at re-education of thinking and actions become important. Re-education with regard to faulty actions and tendencies is a dynamic process based on understanding of the various dynamic factors. It may take place through analysis without being actively introduced by the therapist. In other patients it can be achieved only by being made a recognized part of psychotherapy. This type of therapeutic activity may be indicated when one deals with an unwillingness to use self-control or with emotional abreactions, but not with true neurotic acting out.

In a 24-year old man, immature and rebellious behavior in college and in later life was related to his attitude toward authority figures whom he both respected and rejected. Further analysis revealed his lack of strong identifications in his life development. The important therapeutic aspects became the development of a reorientation to persons in his adult life, the understanding and correction of a faulty need to control others, the awareness of the rights of others, and his responsibility to others.

The treatment of another ambulatory patient who manipulated the people in his environment illustrates dynamic analysis and application to re-educational and rehabilitation aspects. In the course of treatment the patient stated that he felt "manipulated" by friends—for example, he felt at times that there was not an emotional relationship but that he was treated like an object. He was being used to further some ends. Analysis revealed that his parents, by putting great emphasis on scholastic prestige, had shown a disregard of his feelings and opinions. This attitude had been present in early childhood and,

be assumed, probably since birth because he was the first-born son of an orthodox Jewish family. Resentment of such attitudes was intense and could be traced back to childhood. In addition to this family constellation, another factor in manipulation was being used to bring about changes in the environment, leading to insecurity and a defensive attitude to others. He began to recognize his own resentment involved in feeling manipulated and his projection of his reactions onto the friend. When these dynamics became clear to him, they were analyzed further in this special connection, and he was advised to apply in a constructive way what had become known to him and to some extent adjusted within him. For reasons which need not be discussed in this context, I felt it unwise to develop a prolonged dynamic analysis, in which he had participated with an able psychiatrist before he had consulted me. The emphasis was put on application of changes in attitude and behavior, resulting in improved social and work relations. While brief repeated reviews of interpersonal relationships were utilized whenever the occasion arose, dynamic analysis proceeded simultaneously along other lines.

A therapist should remember the value of reassurance which is offered to a patient through the recognition of slight improvement in a long-term treatment. One should not insist that a depressed or discouraged patient struggle through an analysis of his life experiences without such help. There is no proof that medical harshness is an essential therapeutic tool or that a physician's aloofness and impersonality must always hide his sympathy.

Emotional reactions of marked intensity and prolonged duration may have a far-reaching pathologic effect. The effect of prolonged intense tension for which no outlet can be found resulting in a paranoid panic is well known. Less understood are transient paranoid projections or depressive moods with suicidal dangers as phenomena of prolonged intense resentment. An interesting example of the combination of intense anxiety with sexual insecurity is seen in the resulting sexual excitements in which the anxiety may be present in relatively pure form or be converted into fear or manic-like elation. In this type of disorganization,

hetero- and homosexual drives are displayed frankly or in concealed form, often accompanied by angry outbursts and attack on others, or suspiciousness and projections. These reactions, i.e., panic, resentment, or sexual excitement, may occur in psychoneurotic as well as in schizophrenic and depressive illnesses. Their occurrence demands a change in psychotherapy and often a change in the final goal to be obtained. In my experience it has never been necessary to abstain from dynamic investigations if one proceeds with a clear awareness of the significance of the psychopathologic changes and if, in marked excitements, one resorts to chlorpromazine as a means of emotional control which permits continuation of psychotherapy.

Psychopathologic crises in the psychotherapeutic progress demand decisions. It may be possible to alleviate the crises psychotherapeutically in ambulatory treatment or it may be necessary to continue in the protected atmosphere of a hospital, with an adjustable routine to occupy and distract the patient, and, if necessary, with the aid of modern drugs. An important point to remember is that unconscious dynamics become obvious in such crises. A knowledge of them offers valuable psychotherapeutic guidance.

In conclusion, I wish to repeat that dynamic psychotherapy is based on an awareness and understanding of the psychopathologic changes which take place at any time during the course of treatment. Changes in the overt or in the not directly observable dynamic constellation may demand a change in procedure or in formulation of near or distant goals. It is fortunate that psychotherapeutic knowledge progresses constantly, guided by newly acquired facts and by the adjustment of past theories to present knowledge. Psychotherapists of any period must recognize current limitations and expect future changes in theories, and improvement in procedures.

TREATMENT OF HOMOSEXUALITY BY INDIVIDUAL AND GROUP PSYCHOTHERAPY¹

SAMUEL B. HADDEN, M.D.²

Few psychotherapists are enthusiastic about the results obtained in the treatment of homosexuality. The 1955 report of the Group for the Advancement of Psychiatry (1) stated:

The homosexual who has no apparent anxiety and who admits no concern about his problem will be thoroughly resistant to treatment, and the threat of punitive measures will not render him amenable to treatment. With the use of a psychotherapeutic approach some homosexuals can benefit from treatment. This is particularly true of those individuals who demonstrate anxiety associated with their problem and are sincere in their desire for therapy.

We have all had many disappointments in the management of the homosexual, and my experience with their individual therapy has not been very rewarding.

Homosexuals seldom seek treatment except under duress, and we most often see them after they have been arrested and granted a suspended sentence on the promise of seeking psychiatric care. As a rule such individuals bitterly resent this condition and express the feeling that since nature has played a trick on them, no demands should be placed upon them to change their pattern of sexual behavior. I have observed that when a young homosexual associates with other homosexuals for a short time, the older and more experienced aberrants are prone to assure them that nothing can be done for their condition and that treatment is a waste of time. The acceptance of this opinion makes it necessary for homosexuals to rationalize their irregular sexual behavior, and to be emphatic in announcing that this way of life is most satisfying and that they would not change if they could. Because of acceptance by other homosexuals they are prone to feel that they have found a gratifying existence which they intend to follow. On only brief

contact with them however, one readily appreciates what lonely individuals they actually are. Disturbed by their isolation from the main stream of society, and convinced that they cannot change, they become contemptuous of treatment efforts and sneer at a culture which expects them to alter their sexual pattern. When anxiety is experienced because of their sexual maladjustment they utilize it to build up the rationalization that homosexuality is what they want in life. Whenever this ego-protective rationalization fails, dangerous depression ensues; this is the principal reason for the high suicide rate among homosexuals.

From early experience with group psychotherapy I learned that the average homosexual had known such vigorous rejection by society that he was unable to present his problem before the therapeutic group. When he did, despite protective efforts of the therapist, the anxiety and hostility which he activated in the group usually were too disturbing and he generally dropped out of treatment. I have seen groups less upset by the revelation and discussion of incest than they were when homosexuality was disclosed by a member. Therefore I now keep homosexuals out of groups composed of patients with varied neurotic states.

The purpose of this presentation is to do little more than report a few impressions gained from the individual treatment of homosexuals over almost 30 years, from their treatment in groups with other neurotics, and from their progress in groups made up exclusively of homosexuals. Most of the experience has been in private practice. In selecting these patients I have included only males who have persistently and consistently in adult life preferred sexual experiences with those of the same sex, and who have had some degree of rejection or revulsion toward sexual union with females.

Over 3 years ago when 3 male homosexuals were forced into private treatment almost at the same time, an opportunity presented itself to initiate a group made up exclusively

¹ Read at the 113th annual meeting of The American Psychiatric Association, Chicago, Ill., May 13-17, 1957.

² Assoc. Prof. of Psychiatry, School of Medicine, University of Pennsylvania; Chief of Neuropsychiatric Service, The Presbyterian Hospital, Philadelphia, Pa.

of active homosexuals. After several preliminary individual sessions the group was started. Two of the members were 22 years old; the third was 19. The 2 older ones had been active homosexually for a bit over 5 years; the youngest member had had an active homosexual career from the age of 12 when he began to frequent the neighborhood movie on Saturday afternoons.

This boy, Ben, a college student, came from a moderately wealthy Jewish family. At his home in another city he was a frequenter of all the homosexual haunts. Upon arrival in a university city, he plunged into the "gay" life of the community. Some months after his appearance on campus the members of a club to which his older brother had recently belonged began to press him to join. Fearing that his homosexuality would be discovered if he did this, he grew very anxious and began to cut classes. Informed of his impending dismissal, his parents paid Ben a surprise visit and demanded an explanation. When he eventually revealed the nature of his problem they sought psychiatric assistance for him. He was promptly placed in a sanitarium where he had 8 months of intensive analysis, without any benefit. On his discharge his family was advised that his condition was hopeless, since he did not wish to be helped. Because of the stigma of his homosexuality the parents wanted him away from home, and decided upon another attempt at treatment. Hence, he took up residence in Philadelphia.

When first seen Ben maintained that he had no desire to undergo change; he informed me that any psychotherapeutic efforts would be wasted because homosexuality was so attractive to him that nothing could influence him to give it up. He had set up an "establishment" in the appropriate zone of the city and entered into the "gay" life with zest.

Tom, one of the older boys, was equally emphatic about his intention to remain a homosexual. He admitted his condition to his mother and stepfather after friends had reported that he was associating with a "gay" group. His parents were already suspicious because he frequently remained away from home overnight and went on trips (which they knew he could not afford) with older men. At the time of coming into treatment he was "married" to a wealthy young physician and travelled with a group of homosexuals who were almost exclusively medical residents and students. He left our therapeutic group suddenly without any explanation after only 2 sessions. When met on the street about a year later Tom explained that the group with whom he associated had issued an ultimatum because they feared exposure if he continued in treatment. Because this homosexual circle was the only place where he had ever found significance, he said he could not tolerate giving up these friends.

Tom was an only child whose father had disappeared before the patient was 18 months old. The boy was reared in an apartment with his mother, grandmother and an aunt. He had no male com-

panions, and when he started to school he could not integrate himself with boys and preferred to play with girls. His mother had many suitors, all of whom he felt were rough and loud-mouthed, and when he was about 11 she married the loudest-mouthed one of all. Tom was a brilliant student, graduating from high school at the age of 16, then immediately entering a novitiate for the priesthood. At the end of the first academic year he was dismissed without explanation. He maintained that during high school and the novitiate he had no disturbing sexual feelings but realized he had effeminate traits and interests. On returning home from the seminary he spent much time with his aunt and her friends, and although he went out with many girls in the neighborhood he experienced no sexual feelings toward them. He took them to concerts, theatres and art museums, but had no male friends because he did not enjoy sports and the other activities in which they were interested. He was disturbed by his inability to integrate with his peers and felt very lonely. About six months after returning home he obtained employment in the office of an architect. Soon he made friends among artistic people, and became enthusiastic about them. He was invited to "gay" parties and while initially shocked by them he eventually met a physician with whom he fell in love. At first he was definitely disturbed by this unacceptable relationship and was constantly being admonished by his confessor to terminate the liaison. Eventually he stopped attending church, and during our brief therapeutic acquaintance he was most hostile to religion.

Bill, the third member of the group, was forced into treatment after he had revealed the nature of his problem to the family physician, who, without his consent, informed Bill's parents. Between the ages of 19 and 20 Bill had made 2 suicidal attempts and weeks before consulting me had disappeared from home and was ultimately located in an eastern psychiatric hospital as an amnesia victim (partial suicide). After his second suicidal attempt he had had psychiatric treatment for a short time, but did not reveal his homosexual problem until he was returned home after his amnesic episode. He was in a state of despair. Convinced by other homosexuals that there was no hope of change, and because of the disgrace he had brought on his family, he expressed a feeling that death was the only solution.

Bill was an only son, having 4 older sisters. His father was an exceptionally harsh man and frequently beat the patient with his fists until at 16 the son had developed into a very husky and robust young man, capable of defending himself. He always felt close to his mother and sisters. Despite the fact that he was an outstanding football player and all-around athlete in school, Bill was interested in aesthetic things; he became an expert hairdresser after practicing on his mother, sister and friends. Although he enjoyed considerable popularity because of his athletic prowess, he was never well integrated with boys, and around the age of 12 became aware of strong sexual feelings toward his

team-mates and other boys. During his last year in high school, following a row with his father, he left home and went to an all-night theatre, and in the washroom there he had his first homosexual experience. Despite intense feelings of guilt and remorse this initiated a very active period of homosexual promiscuity, although he constantly struggled against it. The idea of sexual relations with girls was repulsive to him. On graduation from high school he too entered a novitiate and was asked to leave at the end of a year. He maintained that while in the seminary he had no homosexual problem and was very happy, and was distressed by his dismissal. After leaving he became interested in the theatre and joined a local theatre group. His homosexual activities soon started again, and he left home to "live" with a man who was a university teacher. Although he loved this man the relationship was the source of little comfort to him, since the moral conflict led to severe episodes of depression. He felt possessed and doomed. His suicidal attempts were genuine, and I feel that his amnesia was a compromise suicide.

My first homosexual psychotherapy group began with these 3 youths. All were masculine in appearance although one dressed in rather "gay" fashion. At the first session I learned that all were casually acquainted and had often seen each other in homosexual haunts. The escapades of Ben were well known to Tom and Bill, and they soon began to speak of parties held at his "establishment." Their feelings about homosexuality were initially explored. Ben announced that he had no intention of changing and, in fact, had a great ambition to be "the most fabulous faggot in the land." He expressed the belief that this could be accomplished when he inherited some money at the age of 21. Tom said that he wouldn't change if he could because he was moving in a circle that would not be open to him if he were not a homosexual. Bill had no hope of altering, and, as already stated, felt doomed because of the intense urge he had for sexual experience with males. He had no similar feeling for females and although he enjoyed their company any thought of sexual relations with women nauseated him.

As consideration of their activities progressed, the front page story of the murder and dismemberment of a sailor by a homosexual known to all three of them was discussed. Bill and Tom had on more than one occasion been invited to spend a weekend with the murderer, as was the luckless sailor. Several other murders of or by homosexuals

that had occurred in the area were then discussed. One of the group was well acquainted with a youth who had recently disposed of his parents by poisoning. The group sought an explanation of why homosexuals committed such violent crimes, and when it was suggested that only they could supply the answers after examination of their own feelings, anxiety mounted as they disclosed violent emotions activated by threats of exposure and blackmail. Before the first session ended they were in agreement that homosexuals were not as gentle and artistic as they appeared. At this and several subsequent group meetings not only were murders among homosexuals discussed but their frequent suicides as well. Eventually when the group was reduced to Ben and Bill, Ben's rationalization that he preferred homosexuality was completely destroyed; each, and Tom, freely admitted a desire to change and spoke of the many homosexual friends with whom they had discussed the problem who were just "covering up" their real wish to undergo liberation. Finally there was a rejection of the homosexual pattern which eventually became recognized as but a part of an inadequate behavior pattern which must undergo alteration. With their homosexuality presented to them as but one facet of their neurotic pattern of maladjustment, ego strength was gained which enabled them to pursue further treatment. At no time in this and subsequent groups was any attention focused upon the nature of their homosexual experiences or the frequency of indulgence.

The scope of this paper does not permit a description of the psychotherapeutic sessions, but the group's various fantasies in relationship to homosexuality were explored as were the unsatisfactory parental relationships, the disturbed nature of identifications with their own sex, and the factors which led to arrest of their psychosexual development.

After Tom left, the group was continued with Ben and Bill in attendance. They had already become strongly motivated to change. Bill was drinking to excess and soon recognized that all his homosexual experiences followed alcoholic bouts and that this drinking was, in effect, an advance excuse for yielding to the homosexual urge. Soon his drinking decreased and was finally discon-

tinued, and he became more efficient on his job. At work his isolation diminished and he began to join in the banter which was often sexually tinged. During the week he started visiting the homes of his married sisters and began to attend sports events with their husbands. When his family went to the shore for the summer he joined them on week-ends during which he associated with a group of young people. In the course of some roughhouse play on the beach his face was pushed into vigorous contact with the breast of a young woman, following which he experienced an erection and his initial erotic interest in the opposite sex. For several days after this incident he was almost completely preoccupied with fantasies of the full female figure; he dreamed of nothing else, and soon began ardent petting with a few older girls at his place of employment. His erotic dreams, previously homosexual, now became heterosexual; his sexual drive led to a period of promiscuous petting which was brought under control when he was admonished by his religious advisor. While I did not consider him ready to do so, Bill terminated treatment, after 10 months, feeling that he was fully a man although acknowledging that he still experienced homosexual feelings when he saw a well developed, robust male in a bathing suit.

Ben, the remaining member of the initial group, after several private sessions, was integrated with a group of mixed male psycho-neurotics who were well advanced in treatment. On integration he did not reveal his homosexuality until another member of the group began discussing anxieties growing out of a series of early homosexual experiences. Ben then disclosed his homosexuality and found acceptance and understanding in this group. He did activate some group anxiety as a result of which there was considerable focus upon homosexual activity and feelings. All the members have re-explored the nature of their parental identifications and have benefitted substantially by Ben's presence and contributions. While he revealed recently that it has been about a year since he indulged in homosexual experiences, it is in other areas that progress has been most remarkable. Since his admission to this group another homosexual has been successfully added and has made gratifying progress.

A second exclusively male homosexual group of 7 members has enabled me to confirm the observation gained from the initial project. Members of this second group quickly destroyed the rationalization that they regarded homosexuality as a desirable way of life and all soon were able to acknowledge anxiety about their sexual pattern and admit a desire to change. Two young and extremely immature members were vigorously importuned by the others to cease conspicuous behavior when they were on the street together after leaving the group sessions. This occurred recently, and the assault has caused one to be voluntarily absent. The second, because of truancy and continued homosexual behavior, was returned to court custody but is again attending group sessions. The others have come to regard themselves as generally maladjusted rather than as pathetic persons upon whom nature has played a trick. They now recognize that their homosexual pattern grows out of earlier experiences, and realize that they can recover from the effects of these traumatizing experiences. Ben, from the first group, has attended 2 sessions of this group and has contributed substantially to its progress. The patients now recognize themselves as having been poorly integrated from early life and relate it to past experiences in their homes. After once admitting a desire to change they begin to show improvement in other spheres, quite often before there is any alteration in their homosexual behavior. General efficiency is increased and a greater sense of responsibility in many matters is developed. Parental relationships improve and character defects such as lying become less glaring. Some of the effeminate traits disappear, and while their artistic and aesthetic interests continue these are no longer mere entré to homosexual circles.

The homosexual, despite his protestations, is an unhappy individual who feels isolated from the main stream of society, and because of this sense of isolation he seeks the company of fellow homosexuals. Consequently, in treatment he gains a feeling of security when he is incorporated into a group made up exclusively of his own kind, designed to promote psychosexual growth. The therapist of such a group must be tolerant and acceptant; his very attitude toward the

group members is one of the most therapeutic factors involved in the experience. The only authority he should exercise is that which grows out of his knowledge of psychopathology and psychodynamics.

In the early phases of all groups there has been spontaneous discussion of the nature and frequency of members' homosexual experiences, but the therapist has never initiated such discussion nor shown any desire to be kept aware of the frequency and nature of indulgence as the group progresses. I have not been concerned about sexual acting out among group members and have never been censorial. This attitude is necessary to provide a beneficial experience to all.

The lack of prying on the part of the therapist has, I have felt, contributed to the development of ego strength, been appreciated as a manifestation of confidence, and has helped to ease the super-ego which still contains disturbing components developed by earlier authority. As members relinquish the comfort of their rationalization that they want to remain homosexual, they inevitably form a libidinal attachment to the therapist, and when this occurs it is necessary that he be patient about their continued attachments to homosexual friends and their frequenting of homosexual haunts. If an individual does not appear to be making a sincere effort, you can be sure the other group members will know of it and will provide the pressures that will eventually initiate a change. At such a time, the therapist may have to afford some type of protection to the involved member.

As the group becomes aware of their other patterns of maladjustment the therapist must offer some hope by indicating the frequency of the same patterns in heterosexuals with whom they must eventually identify. As one member phrased it, this gives them a feeling that they are "not as far left of center as we thought."

It is, as a rule, several months before any alterations are noted, and since I never inquire about sexual outlets, changes are first observed in other areas. For example, Ben, the one who aspired to be America's most fabulous faggot, was supported *in toto* by his family and planned an indefinite parasitic existence. Some months after commencing treatment he began to control his spending,

then came a series of fantastic business plans. Next there was a job which he presented as being quite worthwhile but which was in reality unimportant. Then he had several actual positions which he described as better than they were, but eventually he obtained substantial employment which now supports him adequately.

Because of anxiety about the loneliness which may result from giving up their homosexual connections, most such individuals in treatment reach a critical point at which there is likelihood of regression. The homosexual drive may be remarkably diminished, or even absent, and patients may be adjusting to an heterosexual pattern but final "commitment" is difficult. This means giving up friends who have accepted them in their homosexuality. To "commit" themselves to heterosexuality involves the risk of identifying themselves with a group that would certainly reject them if their "past" became known. More than once I have felt that some of my patients have reached this stage in individual treatment and have discontinued because they could not make the final commitment. In the group the members are supported in this final phase, and with group encouragement and assistance they go on to complete their heterosexual development. When this phase is reached the patient does not fear the rejection of his old homosexual friends—his only fear is the certain stigmatization if his earlier problem is exposed when he enters heterosexual circles. It takes great courage to venture back into normal society after one has become separated through homosexuality. For those who have not moved too far out of heterosexual circles, this is less of a problem.

SUMMARY

From my experience I have concluded that homosexuals can be treated more effectively by group psychotherapy when they are started in groups made up exclusively of homosexuals. In such groups the rationalization that homosexuality is a pattern of life they wish to follow is destroyed by their fellow homosexuals. This breaking down of their rationalization activates anxiety and a desire to change is created. Obvious ego-strength is gained by identification with

others who are also seeking socially acceptable goals. Identification with a group that has a healthy motivation soon banishes the feelings of isolation from which they suffer. When members reach the point where their homosexual drives have diminished or disappeared and they must completely reject all homosexual identifications and identify with heterosexuality they are aided in final commitment by fellow members. The group con-

vinces its members that their homosexuality is not an affliction or trick of fate but a pattern of inadequate behaviour which can be changed.

BIBLIOGRAPHY

1. Report on Homosexuality with Particular Emphasis on this Problem in Governmental Agencies. Report #30 of the Group for the Advancement of Psychiatry, Jan., 1955.

PSYCHOLOGICAL ASPECTS OF PREJUDICE WITH SPECIAL REFERENCE TO DESEGREGATION

HAROLD I. LIEF, M.D. AND IAN P. STEVENSON, M.D.¹

INTRODUCTION

The decisions of the Supreme Court concerning segregation in the public schools and buses have recently accelerated the pace of racial desegregation in the South. This has brought to the fore the subject of prejudice which forms an important aspect of the problems connected with desegregation. Apart from their obvious interest in such matters as private citizens, psychiatrists should especially concern themselves with the subject of prejudice for two additional reasons.

First, psychiatrists are being called upon increasingly to advise and consult with educational leaders and social agencies who must reckon with prejudice in their plans during the current period of transition in race relations. The Supreme Court itself established an important precedent for such consultation when it heard testimony from social scientists before making its decision on segregation in the public schools. Since that time lesser courts and administrative bodies have (on both sides of the issue) appealed to psychological facts and theories to support their decisions. To offer useful guidance and counsel in these matters psychiatrists themselves need to be clear about the nature of prejudice, its origins, and its enormous social effects.

Secondly, prejudice is a symptom of a mental disorder. Not a major disorder, to be sure, in terms of individual psychopathology, but certainly of major importance in its social effects. Although the issue of desegregation may have drawn attention to the importance of prejudice, we should remember that prejudice is really a mode of thought and not an attitude on any one question. The prejudiced person does not perceive accurately or think clearly. He does not perceive clearly because he attributes to the objects of

his prejudice qualities which they do not in fact possess; and he does not think clearly because he generalizes unwarrantedly from the one to the many without discriminating individuals within a category. Such perceptual and thinking disorders do not come about easily, nor are they easily modified. Prejudice in fact often lies deeply rooted within the personality. These are some of the reasons why we think of it as part of the problem of mental health.

Although many aspects of the psychology of prejudice are still imperfectly understood, there exists a body of knowledge on this subject with which psychiatrists should familiarize themselves. In this article we present a review of this knowledge. Although we have used examples from problems of race relations we hope this will not submerge our main point that prejudice is a minor mental disorder which may become symptomatic in connection with any issue. We have drawn upon the rather extensive literature on the subject and also upon personal experience gained from interviewing many persons living in communities where prejudice was strong or had become activated by recent events, such as actual or impending desegregation of schools. We have participated in the preparation of a fuller report on the psychiatric aspects of desegregation which those specially interested in this subject may wish to consult for further details(1).

THE NATURE OF PREJUDICE

Definition.—The etymological origin of the word prejudice indicates a judgment prior to examination of the facts. However, in modern usage the term has come to mean not only prejudgment but also judgment uncorrected by new knowledge. The prejudiced person exposed to new facts may simply fail to perceive them and hence his attitude remains uninfluenced by them. Prejudice derives its importance then not so much from the quality of prematurity and hastiness of judgment as from that of rigidity(2). Prej-

¹ From The Department of Psychiatry and Neurology, Tulane University School of Medicine, and The Department of Neurology and Psychiatry, University of Virginia School of Medicine

udicial attitudes are often sustained against the facts by values and sentiments strongly entrenched within the personality.

The Power of Prejudice.—From the foregoing we might infer that motives of great intensity support prejudicial attitudes, and this is indeed the case. The neglect of opposing facts which is required to maintain a prejudice can only be accomplished because strong emotional forces underlie the prejudicial attitude. These irrational forces are strong enough in many instances to over-ride considerations of immediate personal security. In the service of prejudicial attitudes, men frequently expose themselves to economic ruin, to physical violence, and to punishment for breaking the law. In understanding prejudice, psychiatrists and psychologists must first clearly understand that it derives from strong mental processes the sources of which can powerfully influence men and events.

FACTORS WHICH PROMOTE PREJUDICE

Of psychological factors which promote and sustain prejudicial attitudes, by far the most important are fear and what we shall call mental rigidity.

Fear.—Fear diminishes perceptive acuity leading to lack of discrimination between what really threatens and what is imagined to be threatening. The jittery sentry may shoot his colonel as an enemy intruder. A fearful person is likely to perceive all kinds of harmless objects and persons as threatening.

Fear also evokes adaptive measures which will reduce its accompanying tension. Among such measures are efforts to get rid of the source of the fear or tension. If the source is perceived within oneself the tension may be lessened by transferring the source outside oneself. Fears which concern the general area of self-esteem, status, and prestige are commonly handled by the device of blaming someone else for what goes wrong. These other persons are appointed "scapegoats." The prejudiced person elevates his poor self-esteem in an illusory fashion when he feels himself superior to *anyone and everyone* of a scapegoat group. He does not have to prove his superiority by superior perform-

ance. It is a given, resulting merely from belonging to one group and not another.

This pattern requires that these other persons be seen as threatening when in fact they are not. The perceptive distortion mentioned above permits this. Thus the fearful person often cannot perceive correctly and (perhaps unconsciously) does not want to perceive correctly. He feels at least somewhat better about himself if he misrepresents the environment as being more hostile than it really is. At the same time the increased conviction of danger from without reinforces the original fear. This further promotes the distorted perception. The prejudiced person thus can find himself in a vicious circle in which fear promotes a false perception of the object of prejudice which is reinforced by the need to project blame; the false perception in turn promotes more fear.

The influence of prejudice on perceptions has been studied experimentally, for example by Allport and Postman(3). They showed a group of white persons a drawing which depicted a white man and a Negro talking together. The white man held a razor. In later descriptive reports of this drawing more than half the white persons described the Negro of the picture as holding the razor.

Prejudiced persons tend to persevere in their perceptions. For example, in another experiment(4) the subjects were shown a drawing of a cat and then successively a series of transitional drawings, which gradually assumed the likeness of a dog. Prejudiced persons reported that the drawings exposed were those of a cat far longer than persons who were unprejudiced. They clung to the original perception; they could not believe their own eyes.

Prejudiced people lack discrimination in their perceptions of other people. They fail to see the subtle shades of difference between people. They tend to believe that other persons are much more like themselves than they are, that is, they project their own attributes onto the people with whom they come in contact(5). They form stereotypes of other people and act in accordance with these stereotypes rather than responding to individual acts of individual persons.

Mental Rigidity.—Since not all fearful, guilty people are prejudiced, we must con-

sider another factor to account for prejudicial thinking. Prejudiced people seem to be characterized by an abnormal rigidity of thought. This might be inferred from the fact that prejudice implies a failure to learn from experience, but it has been confirmed by experimental studies.

The prejudiced person is resistant to new modes of thought. For example, persons who rate high in prejudice have greater than average difficulty in changing their manner of solving problems. If tested in a series of problems requiring different methods for their solution, they cannot change from one method to another so easily as persons who are rated low in prejudice(6).

Prejudiced persons are also intolerant of ambiguity and uncertainty. They have difficulty admitting ignorance(7). They tend to categorize people and objects rigidly and into sharply differentiated "good" and "bad" groups without consideration of intermediate states(8, 9).

Finally, we should note that prejudicial attitudes are rarely confined in one person to one topic or group. One careful study has shown that persons prejudiced towards one group, *e.g.*, Negroes, are likely to be prejudiced towards other groups, *e.g.*, Catholics or Jews(10).

Having described what prejudicial thinking is, we shall next discuss how it comes about and what factors modify or enhance it.

INFLUENCE OF LEARNING AND EDUCATION ON PREJUDICE

Men are not born prejudiced. They must learn to perceive and think in a prejudiced manner. For prejudice is a pathological extension of the human capacity to categorize and generalize the objects of the environment. A young child at first does not see the similar qualities shared by different objects. He usually learns to abstract these shared qualities in the middle years of childhood, say between four and ten. During this period he establishes important categories for things and people and begins to respond to them partly according to the categories to which he assigns them. Some automatic categorical responses are necessary and helpful in our adaptation to the environment. If we can

make quick judgments about our surroundings we economize time and effort. We are led into difficulties, however, by two kinds of errors. First, the categories we erect may be incorrectly characterized. For example, the word "Negro" should ordinarily denote persons of a particular race usually having heavily pigmented skin and certain features of hair and face. In addition to these ethnic qualities, the category Negro has had encrusted onto it in the minds of many white persons a great many qualities which are not demonstrably more common among Negroes than among white persons. These additional attributes such as that the Negro is lazy, untrustworthy, easy-going, etc., amount altogether to a kind of myth about the Negro. Such a myth provides an extremely inadequate guide for behavior towards Negro persons. Secondly, responses may be made to the category rather than to the individual person who may belong to the group. A person may thus come to respond to a Negro because he is a Negro (whatever that may mean to this person) and not because of his qualities or behavior as an individual person. Because of the wide individual differences among persons of certain groups responses based only on categorical differences are bound to be clumsy and often quite inappropriate and harmful.

These two errors, inappropriate characterization of categories and response to categories rather than to persons are apparently acquired rather than inborn. At any rate, very young children do not show prejudicial attitudes, but older ones often do(10).

We think we may generally equate opposition to desegregation with prejudice. We realize that there are some rational (if selfish) reasons for opposing desegregation and that there are many factors, such as economic and political factors which contribute to the problem of desegregation in addition to the psychological obstacles. But most of the opposition to racial desegregation is based on prejudicial thinking about Negroes. It has been found that opposition to desegregation increases with increasing age(12, 13). One may accurately speak of an age gradient of prejudice at least with regard to desegregation. This suggests both that prejudicial attitudes are learned and that

once learned they are not readily unlearned, partly because the prejudiced person keeps himself from having experiences or gaining information which might correct his prejudice.

Still other evidence that prejudice is learned comes from studies of the evolution of prejudicial attitudes over broad sweeps of time. For example, Woodward has shown that prejudice against Negroes was very much less in the early and mid-19th century than it became in the late 19th and early 20th century. Indeed the enactment of the Jim Crow laws around the turn of the century was opposed by many horrified protests from responsible persons in the South (14). This kind of evidence thoroughly discredits the notion that certain prejudicial attitudes are innate, or are "part of human nature."

Although we have emphasized the rooting of prejudice in emotional forces, we do not mean that it is entirely uninfluenced by educational measures. As mentioned above, prejudiced persons frequently deprive themselves of correcting information. Yet such information does reach many prejudiced persons gradually and often involuntarily and does in time erode some prejudices. For example, again assuming a correlation between prejudice and opposition to desegregation, such opposition is much less among persons of college education than among persons with only a grammar school education. Those with high school educations fall in between the other two groups (12). Also, significantly more persons now acknowledge the fact that Negroes are just as intelligent as whites than were able to accept this fact in 1942 (12). This change presumably reflects the power of educational measures on gradually reducing prejudicial attitudes.

Although we know that prejudices are learned we know less about how they are learned or why some people learn them more readily and more extensively than others. However, two important factors emerge from studies which have been made of this question. First, prejudices are frequently acquired through imitation; they are copied by children from their elders, or by ignorant persons from their ostensible superiors. Such imitation at least partly accounts for greater

prejudices towards Negroes in certain sections of the country, *e.g.*, the South, than in others (2, 12, 15). Much prejudice simply echoes uncritically the stereotypes of the local culture. Such prejudices are harmful in effect, but not necessarily hostile in motivation as are others which derive more from fear and guilt. Which brings us to the second of the environmental influences favorable to the development of prejudices.

Several studies, admittedly of small numbers of persons, have strongly suggested the influence of tyrannical attitudes towards children on the part of parents in the later development of prejudiced attitudes in the children (16, 17). Presumably the authoritarian attitudes of the parents inculcate fear in the children and this fear originates prejudices in the way we have previously described. For example, irrational punishments by the parents can blur a child's distinctions between sources of danger and sources of security. He may then begin to respond inappropriately to friends as if they were enemies. And, secondly, harsh treatment of the child by the parents makes it difficult for the child to acknowledge his own deficiencies or accept blame; to preserve some self-esteem he resorts to the projection of blame on others.

We cannot distinguish sharply prejudices learned by imitation from those learned as responses to maltreatment at the hands of others. No doubt mixtures of both origins blend in most prejudiced persons. Although one might suppose that prejudices which are merely imitated would be more plastic and more easily given up than those derived from maltreatment, this does not seem to be the case. Heated passions may come into play as readily for a prejudice which is chiefly "cultural" as for one which is more "personal." In fact, the identification of a prejudice with the will of a group frequently strengthens the fervor with which it is held by giving it a more authentic quality. Which leads us next to the influence of groups on prejudices.

INFLUENCE OF GROUP RELATIONS ON PREJUDICE

As mentioned earlier, prejudiced attitudes especially arise to combat thoughts of failure

and loss of status or prestige. Prejudiced persons are sensitive to the opinions of others about them. Accordingly prejudicial attitudes usually express important aspects of the prejudiced person's relations with the various groups of which he is a member.

Attitudes towards desegregation differ markedly in the various groups to which one person may belong. For example, the nation as a whole has adopted a program of desegregation and integration, but certain communities and States express implacable resistance to this goal. A resident of such a community can easily find himself in conflict between loyalties to his State and the Nation. Similarly, economic motives opposing desegregation may conflict with religious ideals which endorse it.

In conflicts of this order, the average person aligns himself with those to whom he feels himself most closely tied. These are nearly always persons with whom he has frequent personal contacts. It thus happens that the influence of a local leader known to local people may far exceed the persuasive authority of the Supreme Court or the President of the United States. These remain distant and shadowy figures, almost abstractions; the local leader may have shaken the hands of half the people in town.

Strong as they are, such personal influences rarely subdue entirely a person's awareness of the other side of the issue. The person prejudiced about desegregation remains aware that his opinion belongs to a minority of the nation and the world. And he would like to have the approval of everyone, not only of his own community. This leads to the efforts, observed in interviewing them, which such persons make to present themselves as rational, scientific, and personally unselfish in the matters at issue. As the English essayist Hazlitt put it, "prejudice is never easy unless it can pass itself off as reason." The prejudiced person disclaims any personal dislike for "niggers," or any wish to see them treated unfairly. He presents himself as guided only by sound "scientific" principles which have shown that "the negro is basically inferior," or "cannot learn," or "is not like other people." This resort to pseudoscientific arguments expresses an awareness in the prejudiced per-

son of another side to the issue and a sensitivity to other groups besides his own immediate one. In this, as we shall mention in a later section, lies much hope for the resolution of prejudices.

Although the prejudiced person takes cues from his immediate group, his own habits of thought frequently isolate him from important knowledge about his own group. It may happen that an articulate minority can persuade the majority that "everyone believes as we do," when this is in fact not so. A study of private and public opinions on certain issues in a small Southern community demonstrated this neatly (18). The observer in this study succeeded in persuading the citizens of this town to express themselves first in groups and next privately to himself alone on a number of matters then pressing in the community. These included such issues as the relative merits of baptism by total immersion and baptism by sprinkling. In their public avowals, to continue the above example, 90% of those questioned favored sprinkling, but privately 71% said either form was equally acceptable. In this and other examples, the citizens responded not to the wishes of the group but to their own myth of what these wishes were. We can hardly over-estimate the importance of such studies for the understanding of prejudice and the means by which a vocal minority may sustain an illusion of its representativeness and its power long after the majority of people in a group have at least begun to think differently on the matter at issue. There are strong grounds for believing that in the South, for example, the number of white persons favoring integration of the races is very much greater than seems to be the case if relative strengths of opinion are judged solely by vocal power (12, 19, 20, 21). We must not confuse attitudes and wishes with articulateness.

Influences of Leaders on Prejudicial Attitudes.—Important implications for leadership arise from the foregoing. The business of leaders is to express and execute the will of a group. But often this will remains latent or silent because the majority of persons in the group are either ignorant of the true will of the group or fearful of expressing an apparently deviant opinion. With re-

ward to overt action they remain passive or neutral. False leaders may exploit the silence by claiming a fictitious mandate from the group. The group's real wishes can only become energized by other leaders who correctly interpret and carry out these wishes. But this requires that such leaders themselves distinguish mere social conformity in the expression of prejudices from strong prejudicial attitudes.

Relations Between Prejudicial Attitudes and Overt Behavior.—The sharp differences often observed between private and public opinions on important issues permit us to enter an equal gap between either private or public opinion and what a person will do when confronted with a changing situation. This is confirmed by a number of studies. A person's statements of his attitude on a given question provide no reliable index to his behavior when put to the test.

For example, LaPiere(22) travelled across the United States with a Chinese couple being received everywhere with great hospitality in hotels and restaurants. After the journey he wrote to the various hotels and restaurants where they had stopped asking if these establishments would receive Chinese as guests. Over 90% of the respondents (who had actually served the Chinese couple) said that they would not do so. Saenger and Gilbert(23) interviewed customers of a department store concerning their attitudes towards Negro sales clerks. They found that 21% of those who had just dealt with Negro salesclerks said that they were "opposed to the hiring of Negro sales personnel generally"; 20% of those customers who talked to Negro clerks stated one hour later that they had never seen any Negro clerks in that store. Some who insisted that they would never make a purchase from a Negro clerk had in fact done so an hour before the interview. Similar inconsistencies between verbal statements and actual behavior have been found in connection with desegregation of the schools. For example, strong verbal opposition preceded desegregation of the schools in Tucson, Arizona(24), and Washington, D. C.(25). But when desegregation occurred the transition encountered almost no opposition.

What these gaps between private and pub-

lic opinions and between public opinions and overt behavior mean (among other things) is that we need to distinguish between prejudice and discrimination. Discrimination (i.e., unfair treatment of certain groups based on prejudice) may occur in conformity with an idea (often erroneous) of local custom or law. It arises from a need to conform much more often or just as often as it arises from important prejudices. And it is correspondingly much more susceptible to change. Because when a person changes his notion of what is acceptable to the group (especially in the situation immediately confronting him) his behavior can rapidly fall into line. After his behavior has changed his prejudices may alter, partly because new experiences have weakened them and partly because a man needs to think that he acts in accord with his convictions. If he changes his behavior to conform to some new social pattern, he will fairly soon change at least the outward expression of his attitudes in order that his behavior may seem consistent with his beliefs. This leads us to the important relationship between prejudice, discrimination, and the law.

How Prejudices and Behavior Related to Prejudices Change.—One often hears that "you cannot legislate prejudice away," or, in the words of William Graham Sumner, "stateways cannot change folkways"(26). We do not think that anyone ever supposed that legislation or administrative acts could change prejudices directly. But what they can do is bring new experiences to a prejudiced person so that he may revise his misperceptions of the objects of his prejudice. Legislation can reduce discrimination and the lessening of discrimination reduces the separative isolation which contributes to prejudices(21, 27).

A number of studies have demonstrated the lessening of prejudice following the lessening of discrimination through administrative changes. For example, a study of attitudes towards Negroes among persons living in segregated and integrated housing projects showed that those living in the integrated housing projects had markedly less prejudice against Negroes than those living in segregated projects. Moreover, those who had moved from a separate to an integrated

project reported a much greater lessening of prejudice against Negroes than did those who had remained in segregated projects. Approximately 75% of the former group changed their attitudes, only 15% of the latter group(28).

Already since the Supreme Court's decision on desegregation of the schools more than 300,000 Negro children have entered schools previously exclusively white. This has brought to several times that number of white children their first close contact with Negro children. We suppose that these contacts are on the whole acting to reduce prejudice.

Clearly not all contacts between two groups reduce prejudice. Segregated buses provide a form of contact between the races, but one which promotes attitudes of superiority and inferiority in the two groups towards each other. More helpful, or if we may use the term, more therapeutic are experiences where equality is assumed. Of such are the new experiences provided by desegregated schools. Even more therapeutic, we believe, are experiences where common goals are shared and worked for together, and this, experiences in the Army have convincingly demonstrated. Prejudices among white soldiers toward Negroes fell markedly after white and Negro soldiers had fought together(29).

Gathering together these various influences and other factors, we suppose that changes in prejudice come about somewhat in the following manner. We shall illustrate with the process of desegregation. Certain social and economic changes first make disadvantageous prejudicial attitudes and discrimination towards a whole group. Such economic and social changes occurred throughout the twenties and thirties of this century and radically altered the position of Negroes in our society. These changes were accompanied by increasing experiences and educational measures which tended to correct misperceptions about Negroes. Together these forces created a climate of opinion which not merely favored but positively pressed for a change in their legal status as Negroes. This was given expression in the Supreme Court's decisions on desegregation in schools and buses in the

mid-nineteen fifties. These decisions had two further effects. First, they greatly increased discussion of the issue thus providing increased opportunities for corrective information to seep through to prejudiced persons; and, secondly, they imposed immediate experiences of Negroes on a great many white people who had formerly isolated themselves or been isolated from Negroes. These discussions and personal experiences, still at this time confined to a small number of people, reduced prejudices (or at least their overt expression) still further. They thus prepared the way for still further judicial or administrative acts bringing further integration of the races. Thus some lessening of prejudice probably must precede judicial and administrative acts. But these in turn may precede widespread reduction of prejudice. Probably considerable prejudice towards Negroes will remain long after formal and legal integration has occurred across the country.

SUMMARY AND CONCLUSIONS

We began by describing prejudice as a minor psychological symptom, an expression of blurred perceptions and unclear thinking. We mentioned its principal origin in fear and its frequent support by a need to reduce guilt through projecting blame onto others. We emphasized the deep roots of prejudicial thinking within the personality.

In the later sections of this article we described a number of factors which can modify the expression of prejudice and its influence on behavior. We pointed out that statements of prejudice and, still more, overt behavior based on prejudice are strongly influenced by groups and by a person's judgment of what the group to which he principally belongs wishes. This section of our paper may make prejudice appear a great deal more plastic than our first sections supposed.

We think this apparent inconsistency can be harmonized by distinguishing prejudicial thinking and individual prejudices. Such faults of thinking as overgeneralization and responses to categories rather than to individuals cannot readily be given up, especially when they are sustained by fear and

have been practiced for many years. But individual errors of judgment can be corrected by new experiences. People can change their ways of looking at a particular problem, even though it takes much longer for them to change their general habits of approach to any problem.

These new ways of looking at a problem may come through new experiences brought about by legislative, judicial or administrative acts. Changes of behavior will follow awareness of new laws or customs; changes of attitudes may come later as the new experiences correct misperceptions and as the changing person seeks to bring his attitudes into line with his conforming behavior.

BIBLIOGRAPHY

1. Group for the Advancement of Psychiatry, Committee on Social Issues: *Psychiatric Aspects of School Desegregation*, New York, Group for the Advancement of Psychiatry, 1957 (Report No. 37).
2. Allport, G. W.: *The Nature of Prejudice*. Cambridge, Mass.: Addison-Wesley Publishing Company, Inc., 1954.
3. Allport, G. W., and Postman, L. J.: *Trans. New York Acad. Sci., Series II*, 8: 61, 1945.
4. Frenkel-Brunswik, E.: *J. of Personality*, 18: 168, 1949.
5. Scodel, A., and Mussen, P.: *J. Abn. and Soc. Psychol.*, 48: 181, 1953.
6. Rokeach, M.: *J. Abn. and Soc. Psychol.*, 43: 259, 1948.
7. Rokeach, M.: *J. of Abn. and Soc. Psychol.*, 47: 482, 1952.
8. Fisher, J.: *J. of Personality*, 19: 406, 1951.
9. Block, J., and Block, J.: *J. of Personality*, 19: 303, 1951.
10. Hartley, E. L.: *Problems in Prejudice*. New York: King's Crown Press, 1946.
11. Criswell, J. H.: *Arch. Psychology*, No. 235: 1939.
12. Hyman, H. H., and Sheatsley, P. B.: *Social Forces*, 1956, p. 15.
13. Lee, H., and Stevenson, I. P.: *Psychol. Monographs*, 71: 21, 1957.
14. Woodward, C. V.: *The Strange Career of Jim Crow*. New York: Oxford University Press, 1955.
15. Stouffer, S. A., et al.: *The American Soldier: Adjustment During Army Life*, Vol. 1, p. 579. Princeton, N. J.: Princeton University Press, 1949.
16. Harris, D. B., Gough, H. G., and Martin, W. E.: *Child Development*, 21: 169, 1950.
17. Ackerman, N. W., and Jahoda, M.: *Anti-Semitism and Emotional Disorder*. New York: Harper & Brothers, 1950.
18. Schanck, R. L.: *J. Soc. Psychol.*, 5: 121, 1934.
19. McGraw-Hill Research Department. *What the Factory Worker Really Thinks*. Factory, November 1949, pp. 103.
20. Gallup, G. R.: *American Institute of Public Opinion Poll*, January 17, 1949.
21. Maslow, W.: *Ann. American Acad. Political and Social Science*, 275: 9, 1951.
22. LaPiere, R. T.: *Social Forces*, 13: 230, 1934.
23. Saenger, R., and Gilbert, E.: *Int. J. Opinion and Attitude Research*, 4: 57, 1950.
24. Dozier, E., and Dozier, M.: *Initial Hesitation in Schools in Transition: Community Experience in Desegregation*. Ed. by R. M. Williams, Jr., and M. W. Ryan. Chapel Hill: University of North Carolina Press, 1954.
25. Bower, R. T., and Walker H.: *Early Impacts of Desegregation in D. C.* Paper read before Society for the Study of Social Issues, American Sociological Society meetings, August, 1955. Bureau of Social Science Research, The American University, Washington, D. C.
26. Sumner, W. G.: *Folkways*. Boston: Ginn & Co., 1940.
27. Clark, K. B.: *Soc. Issues*, 9: 4, 1953.
28. Deutsch, M., and Collins, M. C. E.: *Inter-racial Housing: A Psychological Evaluation of a Social Experiment*. Minneapolis: University of Minnesota, 1951.
29. "To Secure These Rights," the report of the President's Committee on Civil Rights. Washington, Government Printing Office, 1947. (p. 140).

TOWARD A DEFINITION OF THE THERAPEUTIC COMMUNITY

HARRY A. WILMER²

The term "therapeutic community," in its application to the mental hospital, is a relatively new term, and one that is not always clearly understood or precisely used. What do we mean when we speak of the therapeutic community in the mental hospital? Unfortunately, some of us may mean one thing and some of us another. The term has come to have a wide variety of meanings, many of which are vague, misleading, euphemistic, or even totally erroneous.

An effort must be made, I believe, to arrive at some reasonably precise even if tentative, definition of this term in its specific application to the mental hospital. Otherwise, a scientifically valid comparison of our observations on the efficacy of the therapeutic community in the management of mental illness will become increasingly impossible.

"A term," Bridgeman points out, "is defined when a condition is stated under which I may use the term and when I may infer from the use of the term by my neighbor that the same conditions prevail." As a first step toward a definition of the term "therapeutic community" for our purpose, therefore, I propose to describe the conditions under which a mental hospital may justifiably be called a therapeutic community as I see it.

What is the task such a hospital sets itself? How does it go about this task? What does it aim to accomplish? What are its results? The answers to these questions call for philosophical, naturalistic, and technical observations(6, 24, 25). In this paper an attempt is made towards a broad definition; and a description of a therapeutic community at the U. S. Naval Hospital, Oakland, California is presented.

¹ Read at the 113th annual meeting of The American Psychiatric Association, Chicago, Ill., May 13-17, 1957.

² The opinions contained herein are the private ones of the author and are not to be construed as the official views of the Navy Department or the views of the Naval service at large.

³ Captain, Medical Corps, USNR, Naval Medical Research Institute, Bethesda, Md. Present address: Mayo Clinic, Rochester, Minn.

THE THERAPEUTIC COMMUNITY CONCEPT

The concept upon which the therapeutic community rests is not new in the history of mental treatment. The colony at Gheel, Belgium, which has been in continuous existence since the 13th century, is one example where the patients are afforded a much more varied social opportunity than in a mental hospital, but we must keep a clear distinction between community care and a therapeutic community where the patients themselves interact under trained psychiatric guidance. While there was a certain amount of ideal patient participation in the planned therapeutic program in the American(23) as well as the British armed forces during the war, after demobilization the momentum appeared to diminish in the American scene but retained some of its force in Britain. An extensive methodical scientific exposition of it was made in 1952 by Maxwell Jones(11), who has operated a therapeutic community in psychiatric hospitals in England for the past 16 years, following upon the early war work at the Northfield Military Hospital(4, 5, 7, 9, 16).

The basic departure of the therapeutic community concept from traditionally established concepts of the mental hospital is the emphasis that it places upon socio-environmental factors in the patient's hospital experience. In the hospital which operates as a therapeutic community, socialization and the sense of belonging take their place along with psychotherapy. The traditional order of hierarchy is reversed, and the hospital is regarded as the patient's world rather than the doctor's domain; thus the traditional staff attitudes and staff-patient relationships are considerably altered. So also are the procedures employed: self-control, dignity, and trust supplant excessive imposed controls, restrictions, regimentation, and tradition-bound rituals.

The hospital is conceptualized literally as a form of community with its special culture and subcultures, similar both in the family sense and in the larger sense to the communities in the outside world from which the

patients have come and to which, it is hoped, they will again be able to return. Its operations are designed to create a social environment—a therapeutic milieu—which gives the patients and the staff a sense of membership in this community.

The therapeutic community may use any or all of the somatic or group or analytic or nonanalytic therapies; but its basic therapy is milieu therapy. It is neither authoritarian nor democratic in a political sense, nor permissive in a play-therapy sense. Its efforts are not dictated by "humanitarian" purposes, but by therapeutic purposes which are humane.

It imposes limits on certain forms of behavior, initiating these limits from the members whenever possible. It takes what it can use from behavioral science, psychology, sociology, and anthropology, and employs its borrowings for the practice of medicine. It strives to get away from the use of locks, mechanical restraints, punishment, and suppression of ideas and feelings in the belief that these practices do not serve therapeutic ends. Instead, it fosters, by every possible means, an environment without fear and distrust, in which patients and staff feel safe and in which communication is relatively free. It operates successfully only in an elastic atmosphere where learning, by both patients and staff, is the enduring task. It seeks continually to solve its problems in terms of interpersonal relations, by helping the patient to identify himself with a social group and through identification modify his social attitudes and behavior because of his growing awareness of his role in relationship to other people.

Its ultimate objective and the general means by which it attempts to attain this objective have been summed up by Main as follows:

The socialization of neurotic drives, their modification by social demands within a real setting, the ego-strengthening, the increased capacity, sincere and easy social relationships, and the socialization of super-ego demands, provide the individual with a capacity and a technique for stable life in the real world(16).

And by Jones and Rapoport as follows:

A therapeutic community differs from other hospitals in that it is committed to the idea that socio-environmental and interpersonal influences play an important, though not exclusive, part in the treatment program, and it is characterized by

an atmosphere of intimate, spontaneous face to face interaction in which lines of communication are relatively free, with both patients and staff having access to the total body of relevant knowledge in the life of the institution(15).

This is only a beginning in the problem of the conceptualization and definition of the therapeutic community. The process of the therapeutic community and change will be reported in separate communications(33). In terms of what Bridgeman postulates I want to make some attempt to develop a frame of reference. This will be done in 2 ways: an objective inventory of data which allows for comparison between these social organizations, and a description of our community.

A BASIS FOR COMPARING THERAPEUTIC COMMUNITIES

Hospitals which practice the therapeutic community concept are not all alike in their fundamental structure and process and, as a result, do not follow an invariable pattern. In comparing different therapeutic communities with each other, therefore, the scientist must accurately identify the *type* to which he is referring in each instance. This means that he must be discriminatingly aware of the basic ways in which they are dissimilar, as well as the ways in which they are similar.

The following outline is proposed as a basis for making such an identification:

I. FACILITIES

- A. 1. One ward, 2. Part of a hospital, 3. All of a hospital.
- B. 1. Unlocked, Partially locked, 3. Locked.
- C. 1. Adequate general physical facilities, 2. Fair, 3. Poor.
- D. 1. In populated place, 2. Near populated place, 3. Isolated.
- E. 1. Special psychiatric hospital, 2. State hospital, 3. Part of a medical-surgical hospital.
- F. 1. Recreational/occupational facilities adequate, 2. Fair, 3. Poor.

II. PATIENT SAMPLE

- A. 1. Unselected, 2. Partially selected, 3. Totally selected.
- B. 1. Mixed sexes, 2. Occasionally mixed, 3. Unmixed.
- C. 1. Mixed race/creed, 2. Variable, 3. Selected.
- D. 1. Mixed social/economic, 2. Variable, 3. Selected.
- E. 1. 10 to 30 patients, 2. 31 to 100 patients, 3. Over 100.
- F. 1. Mixed diagnoses, 2. Variable, 3. Selected.

III. STAFF

- A. 1. Adequate in number, 2. Fair, 3. Inadequate.
- B. 1. Different "schools of psychiatry," 2. Totally one, 3. Variable.
- C. 1. Full-time active leader, 2. Part-time, 3. Consulting "leader."
- D. 1. Administrative and therapeutic responsibility combined in one leader, 2. Part separate, 3. Totally separate.
- E. 1. Little change in personnel, 2. Variable, 3. Much change.
- F. 1. Collaboration with other disciplines, 2. Occasionally, 3. None.

IV. THERAPY

- A. 1. Daily community meetings, 2. Meetings two or three times weekly, 3. Meeting once a week.
- B. 1. Meetings held where patients live, 2. Variable, 3. Away.
- C. 1. Meeting attended by all patients, 2. Variable, 3. Permissive.
- D. 1. Non-use of seclusion room or restraints, 2. Occasional or variable, 3. Common use.
- E. 1. Leader trained and experienced psychiatrist, 2. Psychiatrist's initial independent hospital experience, 3. Variable.
- F. 1. Daily staff meeting, 2. Two or three times a week, 3. Once a week.
- G. 1. Rare use of sleeping pills, 2. Occasional, 3. Frequent.
- H. 1. Ataractic drugs/barbiturates infrequently used, 2. Variable, 3. Relied upon heavily.
- I. 1. Relatively free communication among staff, 2. Variable, 3. Limited.

V. RESEARCH AND EVALUATION

- A. 1. Personal follow-up with or without questionnaire, 2. Variable or questionnaire alone, 3. None.
- B. 1. Ample written documentation kept current, 2. Variable, 3. Inadequate.
- C. 1. Planned periodic use of "neutral observers," 2. Unplanned "neutral observers," 3. Other.
- D. 1. Absence of hidden recording or observation devices, 2. Variable, 3. Devices used constantly.

VI. LEGAL STATUS OF PATIENTS (types of commitment, voluntary status, other legal matters).

In terms of the 32 points of identification proposed here, the type of therapeutic community conducted at Oakland would appear as follows:

Facilities: One ward; locked; fair physical facilities; near populated place; special psychiatric hospital; poor recreational and occupational facilities.

Patient Sample: Unselected; sex—unmixed; race/creed—mixed; economic/social status—mixed; number—12 to 34 patients; diagnoses—mixed.

Staff: Fairly adequate in number; one doctor; full-time active leader; administrative and thera-

peutic responsibilities combined in one leader; variable amount of personnel turnover; collaboration with other disciplines.

Therapy: Daily community meetings 6 days a week; meetings held where the patients lived; meetings attended by all patients; non-use of seclusion room or restraints; leader trained and experienced psychiatrist; daily staff meetings; rare use of sleeping pills; ataractic drugs and barbiturates infrequently used; relatively free communication among staff.

Research and Evaluation: Personal follow-up of patients on other wards when on duty as Officer of the Day every 8 days, and from hospital records at time of discharge; ample written documentation kept current; planned periodic use of "neutral observers"; absence of hidden recording or observation devices.

No patients were committed, yet because of their service status none were free to leave.

If the same identifying process were applied to another therapeutic community, a totally different pattern might be shown. For example in comparing 4 therapeutic community projects—the Oakland program and 3 others—I found agreement among them all on only the following points in this scale: II (C), Race/creed-mixed; III (C), Full-time active leader; IV (I), Relative freedom of communication; and V (D), Absence of hidden recording and observing devices.

Obviously, then, the scientist is on treacherous ground if he assumes that all therapeutic communities are the same thing. They differ; and unless the type of community to which we refer is clearly identified in each instance, no accurate and meaningful comparison of observations is possible.

A THERAPEUTIC COMMUNITY IN ACTION

In its report *The Community Mental Hospital*, the Expert Committee on Mental Health of the World Health Organization states: "The most important single factor in the efficacy of the treatment given in a mental hospital appears to the committee to be an intangible element which can only be described as atmosphere" (35).

Perhaps the best way to show that this "intangible element" can be produced by very tangible means is to describe a therapeutic community in action. For the 10-month period from July 1955 through April 1956, the locked admission ward of the psychiatric treatment center at the U. S. Naval Hospi-

tal, Oakland, California, was operated experimentally under my direction as a therapeutic community. It is this experiment that I shall describe here, which is modified from many observations in the literature (2, 3, 10, 13, 14, 16, 18, 19, 20, 21, 22, 26, 27).

With certain modifications necessitated by a military culture, the program administered at Oakland was patterned largely upon the well-known projects of Jones, Main, and Rees, whose work I had observed while on temporary Naval duty in England (29, 31). The fact that it was conducted in a military society, with its patriarchal authority and rigid hierarchical system, did not seem to be a detriment to the effectiveness of the program. On the contrary, the natural group belongingness, the habit of working together against common enemies, and the strong emphasis on social environment (16) which characterize the military organization were factors that could be advantageously utilized. It is of historical interest, also, that the therapeutic communities now operating so successfully in England grew to a large extent out of the wartime experience of psychiatrists in military hospitals.

It is significant too, that in the oldest authoritative society in our culture, the military, the conditions necessary to the effective operation of a therapeutic community program were made possible. I was given considerable freedom in the conduct of the experiment, and the program was supported at all levels of command. At the conclusion of the 10-month experiment at Oakland, I was assigned to the Naval Medical Research Institute at Bethesda, Maryland, for one year with no responsibilities other than the evaluation of the data, (some 15,000 typewritten pages of data, 133,000 feet of sound motion picture film, and 40 hours of tape recorded meetings) * some of which I shall now present.

Patients remained on the admission ward for only 10 days, then were transferred either to an open or closed ward. They were followed on the other ward when I was offi-

cer of the day for the entire psychiatric service, and in the weekly meeting I held with all nurses from all wards. The chief psychiatric nurse for the service attended all of our meetings and in the staff meetings reported on the progress of the patients after they left. In addition we studied the final records of the patients at the time of discharge. Beyond this there was no follow up.

PATIENT SAMPLE

During the 10 months of the Oakland experiment, 939 patients (all of them male) were admitted to the 34-bed locked ward on which the program was conducted. They came, singly or in groups, from west coast hospitals, from ships of the Pacific fleet and islands of the Pacific, and from Naval and Marine posts of duty in the Far East. Many of them arrived in restraints and under heavy sedation. All remained on the ward for an arbitrary period of 10 days before being transferred to other psychiatric wards for intensive therapy. The Oakland Hospital is one of the 2 designated psychiatric treatment centers in the Navy, and hence received the most disturbed patients.

The patient sample was truly a *given sample*, unselected and diagnostically mixed. According to the final diagnoses arrived at in the hospital, 44.4% of the group were psychotic, 26.6% psychoneurotic, 28.3% suffered from character and personality disorders, and 0.7% from acute situational maladjustment. The latter group is not included in the first diagram so that the total is not 100%.

A detailed statistical analysis made of 576 representative cases revealed the following additional factors about this smaller patient sample: 68.7% of the men were Navy personnel and 31.3% Marine Corps personnel; 47.9% had been admitted from shore duty within the United States, 33.9% from ships at sea, and 18.2% from foreign shore duty stations; 3.5% were officers and the re-

* The smaller sample here was subjected to many types of analysis, to be reported later in a monograph. As a test of its representativeness, it was compared with the total 939 in terms of diagnosis (psychotic and nonpsychotic); the χ^2 results suggest that it was almost 100% representative ($.98 < P < .95$).

* Results of this study to appear in monographs "Social Psychiatry in Action," Charles C. Thomas, Publisher. And "Practical Social Psychiatry," Naval Medical Research Inst., Bethesda, Md.

mainder were enlisted men (rated and un-rated) or rated chief petty officers. The median age (officers and men) was 24 years, and the median length of service 3 years. In marital status, 64.3% were single, 30.9% married, and the remainder separated or divorced. Serious suicidal attempts had been made by 11.3% of the men immediately

prior to their hospitalization. At the end of their stay on the wards to which they were transferred from the admission ward, 31.9% were still considered 100% disabled and eligible for transfer to Veterans Administration hospitals; 17.2% were ultimately returned to duty, and the rest were separated from the service.

Percent

100

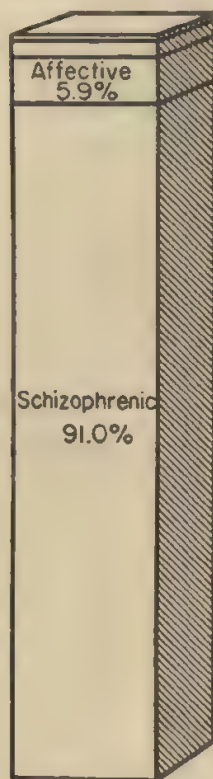
80

60

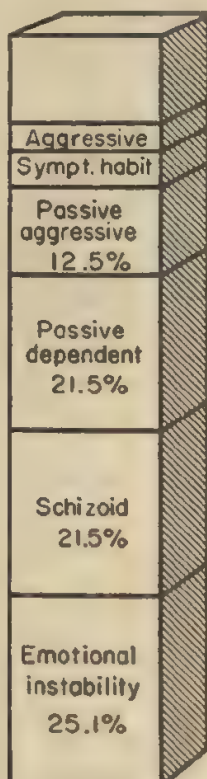
40

20

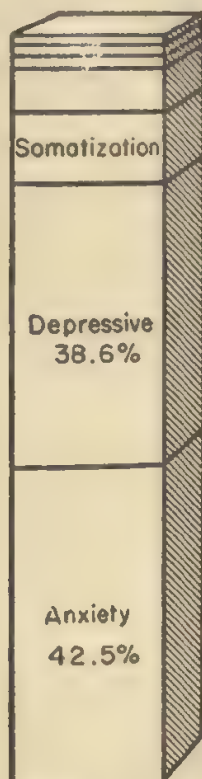
0



Psychotic
N=256
(44.4 % of total)



Character and Personality Disorders
N=163
(28.3% of total)



Psychoneuroses
N=153
(26.6 % of total)

DIAGRAM SHOWING RELATIVE PROPORTIONS
OF PATIENTS IN MAJOR DIAGNOSTIC CATEGORIES

FIG. 1.

THE STAFF

The staff, like the patient sample, was unselected. I was the medical officer on the ward, and my responsibilities included both psychotherapy and administration. The organizational plan at Oakland provided billets for 2 full time nurses and 9 corpsmen on the admission ward. This number was not increased for purposes of the experiment, and all staff assignments continued to be made by routine methods. In the normal turnover and rotation, the 9 corpsman billets on the ward were filled by 49 different persons during the 10-month period of the experiment. At one time we were so short of corpsmen that for an unusually busy week the patients could not get out into the courtyard.

There was no preliminary period of staff orientation and training. The nurses and corpsmen assigned to the ward learned how to operate in a therapeutic community by a process of on-the-job training.

OPERATIONAL PLAN

The ward log shows that, until the therapeutic community plan was introduced, there had been numerous incidents and crises on the admission ward. Restraints, isolation, and barbiturates had been the principal measures for dealing with them. On my rounds as OD, I had often seen patients in the ward's two "quiet rooms," calling out loudly, pounding on the door, lost in utter confusion, or mute and motionless on the floor—a picture familiar to all psychiatrists. And I had puzzled increasingly over what possible therapeutic value such methods could have.

The therapeutic community experiment began one day with an announcement to the staff of the general plan and the issuance of the following initial instructions: 1. no form of mechanical restraint was to be used on the ward; 2. the use of the seclusion room was to be discontinued; 3. the barbiturates were to be administered only under unusual circumstances. The general plan provided that ataractic drugs would be used, though sparingly at first, and that electric shock would be recommended if needed (it was used only once on the admission ward, but recommended for several severely depressed

patients when they were transferred to other locked wards).

Elimination of Restraints and Seclusion Rooms.—No mechanical restraints were used on any patient in the therapeutic community, and no member of the admission ward staff ever isolated a patient in the seclusion room. (On 5 occasions, patients were placed in the seclusion room by officers of the day, but they were removed the next morning when I returned to work.) Even with the suicidal patients the time-honored practice of isolation for "safe-keeping" was not observed. Nor were "suicidal precautions" ever "ordered" for any patient. The risks of individual patients were discussed at the daily staff meetings; but the staff learned by actual experience that the suicidal patients were safer on the ward, with the attention of others, than in the seclusion room and that they also seemed to get well faster there, at least symptomatically.⁶

Use of Drugs.—The number of barbiturates prescribed dropped precipitously (Figure 2). In the last 4 months of the experiment, only 24 doses, oral and parenteral, were given to the 443 patients admitted to the ward during the period. This contrasts with 314 doses given to 400 patients admitted during the 4 months prior to the establishment of the therapeutic community. Sleeping pills were found to be largely unnecessary (30).

Our use of ataractic drugs (chlorpromazine and reserpine) ranged from 4.4% of the patients in the first month of the experiment to 31% in another. In the first 4-month period, 10.8% of the patients were given these drugs. In the second 4-month period, the proportion was increased to 27.9%, to determine whether a more extended use of ataractic drugs would further benefit the community and also because in the last 4 months an open receiving ward was established so that the less disturbed patients were not admitted to our ward. (In both periods the same average dose was used—chlorpromazine, 100 mgs; reserpine, 1 mg. The average number of doses per patient treated, remained about the same, 16.0 in

⁶ We were always aware that a grave emergency could occur in which the quiet room might be necessary. This would have merely been an exception to the rule but during the time of the experiment it did not occur.

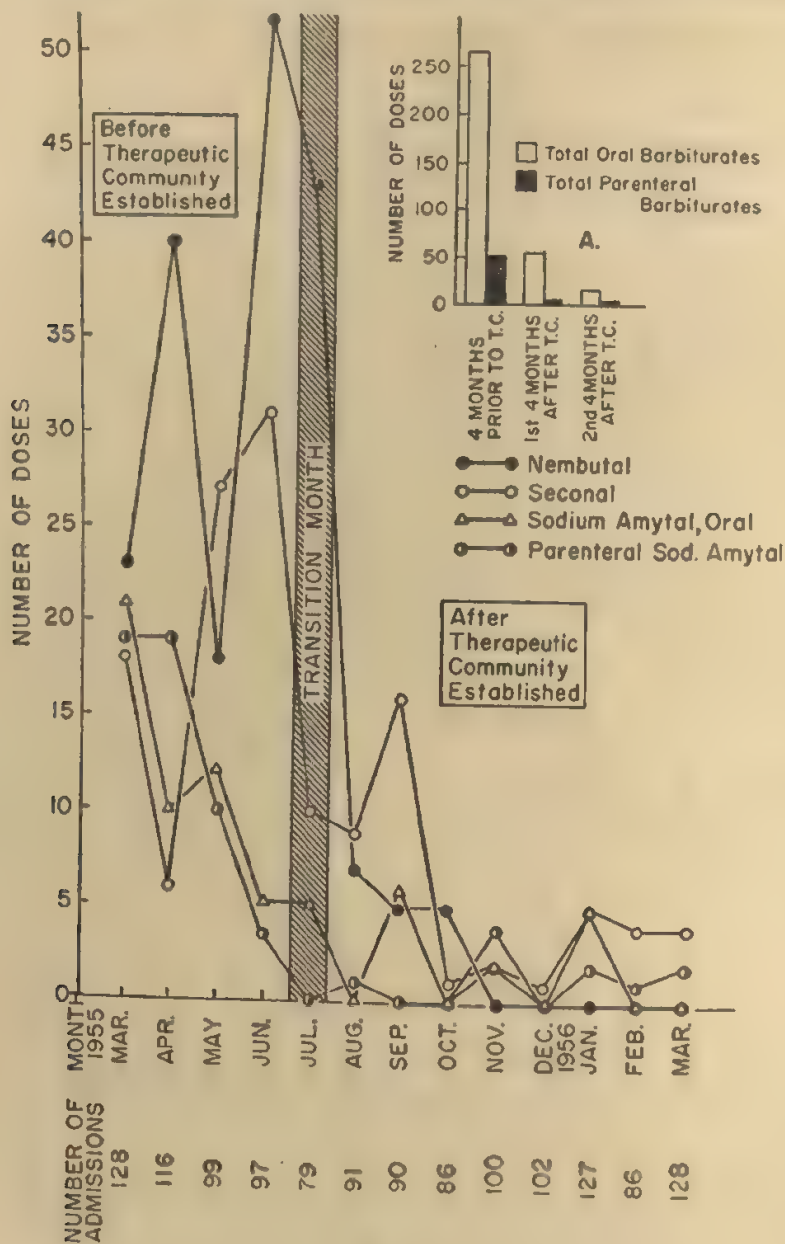


FIG. 2.

the first 4-month period, and 15.7 in the second.)

The number of patient problems and administrative and behavioral difficulties during the second of these 2 periods showed no significant decrease over the first, although the proportion of patients treated with ataractic drugs was almost 3 times greater. The difference is statistically significant at

the 1% level ($.001 < P < .01$). Subjective observations led to the conclusion that extension of the ataractic drug treatment made no appreciable over-all difference on the ward. This may suggest that the drugs have a discernible but limited value. We found them of real benefit in dealing with the most hyperactive cases, particularly with the hebephrenic and manic patients and the greatly

disturbed paranoid schizophrenics. With the less "actively" ill, their value was slight. It was our conclusion that, as with the use of sleeping medication, the extensive use of ataractic drugs was neither necessary nor profitable to the therapeutic community. Patients were allowed to have a degree of anxiety, which was utilized in helping them master their problems of hospitalization.

Community Meetings.—Six days a week, after the morning sick call, the patients and staff gathered together on the ward for a 45-minute meeting. The patients would take their bedside chairs and place them wherever they wished to sit; I always sat in the same chair by the foot of a bed in the middle of the ward; and the staff dispersed themselves throughout the patient group.

It was clear to the patients that whatever they wanted to talk about in these meetings was permissible. During the course of the 10 months the discussion ranged over a wide variety of subjects. It was always allowed to take its direction largely from the patients themselves. I made a minimum number of interruptions and interpretations and in the last few minutes of the hour summarized the meeting. The major therapeutic contribution was made by the patients themselves (33).

All patients were *expected* to attend the meetings. They were not forced to do so, and no "or else" was implied. But the firm expectation alone was sufficient so that only 2 out of 939 patients on the ward during the period of the experiment refused to attend.

Staff Meetings.—As a part of the on-the-job training process, 30-45 minute staff meetings were held in my office 6 days a week immediately following the community meeting. Problems on the ward were taken up at this time, and the community meeting that had just ended was analyzed in detail for the information that it had revealed about each of the patients, the community as a whole, and the staff as well.⁷ These meetings

⁷ Situations of this kind afford an opportunity for patients and staff. In psychiatry we have to accept responsibility for the mental health of the relatively untrained personnel and such meetings provide the fundamental aspect of staff training. Not only was the treatment situation for the patients dealt with but also the staff tensions activated in the process which must be resolved before therapy can be dealt with objectively.

proved to be highly effective for developing the staff attitudes which must exist if the therapeutic community is to succeed.

The morning and afternoon corpsmen shifts alternated with each other, thus the day crew would all have an equal opportunity to attend the meetings. The night crew, however, was constant; so I met with them separately for 30 minutes on the nights when I was OD once a week. In addition I met once a week with the nurses and once a week with the corpsmen.

Interviews with Patients.—Each patient was seen briefly by me within an hour after his admission and in a 30-60 minute evaluation interview within a day or two. If any of them desired further interviews, this could be arranged simply by signing their names on the "doctor's list" posted on the bulletin board. They were seen strictly in the order in which their names appeared on the list, and within 48 hours. During the 10 months of the experiment, $\frac{2}{3}$ of the patients signed the list; of this number, 48.6% requested only one interview. In terms of the major diagnostic categories, the relative distribution in this group paralleled within 2.8% that in the total patient sample. No major diagnostic category was disproportionately represented in the group of patients who requested interviews.

In addition to these general arrangements for interviews, one "treatment case" was chosen at random each 10-days for continuous therapy in daily 30-minute sessions. This was done to give me a deeper insight into the community processes through the observation of the individual patient.

RESULTS

One of the aims of the therapeutic community is to foster self-control through a process of socialization. To achieve this, the patients and staff must have a sense of fellow-membership in the community and must make the attitudes implicit in this membership a part of their conscious and unconscious habit throughout the 24-hour day on the ward, all of which is considered therapy. This places upon both a mutual responsibility for courteous and helpful behavior in all staff-patient and patient-patient relationships. It fosters relatively free and full

communication by patients and staff with a continuous feedback of information and endless observations by community members.

The experiment at Oakland, I believe, largely fulfilled this aim: as behavior improved discernibly, and acts of violence practically disappeared; incontinence was rare; and even the psychotic patients were accepted into the community meetings and often functioned exceedingly well, sometimes showing dramatic symptomatic improvement in a matter of days. We were encouraged to undertake the socialization of "psychopaths" by the experience reported by Jones (12).

The effect of the community meetings carried over also to the more important other 23 hours of the patients' day. Observers who remained on the ward during the entire day were able to report a continuous and rather sophisticated discussion, usually stemming from the morning's community meeting, which helped to relieve the inevitable monotony of life on the ward. The patients read, played cards or ping pong, exercised together in the courtyard, organized games, or formed small groups among themselves. The ward had, in fact, become a social community.

The staff at first were apprehensive at the prospect of dealing with the patients without the familiar mental hospital procedure of imposed controls. But gradually, through a process of "learning by doing," they were largely relieved, at least consciously, of their fear that they could not cope with the patients by the methods permitted to them in the therapeutic community. And, with the patients largely relieved of their fears of harsh treatment, a spirit of mutual cooperativeness and trust developed. The *firm expectation of socially acceptable behavior*, without an "or else" implied, paid dividends.

This is not to say that no difficulties and problems arose in the therapeutic community, but only that most of them were met in a cooperative community spirit and that most of them were mastered.

SUMMARY

The therapeutic community concept is only one of many new approaches to the problem of the mentally ill. But it is a hope-

ful method, and one that can lead, I believe, to the improvement of our mental hospitals. How much its success depends upon the enthusiasm, optimism, and enhanced interest and activity of the staff is difficult to evaluate. The immediate task facing those of us who believe in its efficacy is, as I see it one of making the intangible atmosphere tangible—descriptively, statistically, and graphically—so that the failures and successes with the therapeutic community approach can be analyzed and the procedures perfected. We need to work toward a clearer understanding of what this method is, psychologically, psychoanalytically, and psychiatrically; to identify, define, and study significant elements of the therapeutic milieu as objectively and critically as possible. We need work like the paper of Ackner, Harris, and Oldham (1) in which scrupulous controls are established in the evaluation of treatment programs with proper consideration of therapy and socio-environmental factors with elimination of staff attitude from the final judgments.

The therapeutic community here described represents an effort at the understanding of *patient management*. It is my impression that it is also therapy but this has not been proved. The "traditional role of the patient is to be sick" but in this ward the role of the patient is to exhibit normal behavior as nearly as he possibly can. Management of the acute psychiatric patient was based on the expectation of self-control rather than the traditional staff attitudes that patients were "dangerous" and would momentarily go out of control. With a sharing of responsibility and participation in the over-all program (within the limitations of the military hospital structure) according to the capabilities of the patients the expectations were now based on actual happenings rather than projected fears. This type of management opens up the possibilities of therapy through social interaction with the staff-patient involvement affording potentialities for social development and identification with the group. It also focuses attention on treatment at the beginning of hospitalization (in an admission ward) which is a necessary parallel to studies of therapy and patient management, resocialization and re-

habilitation of the long-term patient. It is also, in a sense, part of the same problem and could ameliorate the magnitude of the enduring hospital problems in patient management.

BIBLIOGRAPHY

1. Ackner, B., Harris, A., and Oldham, A. J.: *Lancet*, 1: 607, March 23, 1957.
2. Aichhorn, A.: *Wayward Youth*. New York: Meridian Books, The Noonday Press, 1955.
3. Belknap, I.: *Human Problems in a State Mental Hospital*. New York: McGraw-Hill, 1956.
4. Bion, W. R.: *Bull. Menninger Clinic*, 10: 3, May 1946.
5. Bridger, H.: *Bull. Menninger Clinic*, 10: 3, May 1946.
6. Kroeber, A. L., ed.: *Anthropology Today*. See Caudill, W.: *Applied Anthropology in Medicine*, p. 771. Chicago: Univ. Chicago Press, 1953.
7. Davidson, S.: *Bull. Menninger Clinic*, 10: 3, May 1946.
8. Deutsch, F., and Murphy, W. F.: *The Clinical Interview Vol. II, Therapy, A Method of Teaching Sector Psychotherapy*. New York: Intern. Univ. Press, Inc., 1955.
9. Foulkes, S. H.: *Bull. Menninger Clinic*, 10: 3, May 1946.
10. Greenblatt, M., York, R. H., and Brown, E. L.: *From Custodial to Therapeutic Patient Care in Mental Hospitals*. Russell Sage Foundation, 1955.
11. Jones, M.: *A Therapeutic Community*. New York: Basic Books, 1953.
12. Jones, M.: *Lancet*, 267: 1277, December 1954.
13. Jones, M.: *Am. J. Psychiat.*, 111: 477, Dec. 1955; 112: 647, Feb. 1956.
14. Jones, M., and Matthews, R. A.: *Brit. J. Med. Psychol.*, 29: 57, 1956.
15. Jones, M., and Rapoport, R.: *Towards the Definition of the "Therapeutic Community" Concept*, a chapter in (33).
16. Main, T. F.: *Bull. Menninger Clinic*, 10: 66, May 1946.
17. Mandelbaum, D. G.: *Human Organization*, 13: 5, 1954; 13: 19, 1954.
18. Moreno, J. L.: *Who Shall Survive?* New York: Beacon House, 1953.
19. Rapoport, R. N.: *Human Relations*, 9: 357, 1956.
20. Redl, F., and Wineman, D.: *Controls from Within*. Glencoe, Illinois: Free Press, 1952.
21. Rees, T. P., and Glatt, M. M.: *International J. Group Psychotherapy*, 5: 157, April 1955.
22. Rioch, D. Mck., and Stanton, A.: *Psychiatry*, 16: 65, Feb. 1953.
23. Rome, H. P.: *Am. J. Psychiat.*, 101: 494, Jan. 1945.
24. Ruesch, J., Jacobson, A., and Loeb, M. B.: *Acculturation and Illness*. Psychological Monograph No. 5. *Am. Psychol. Assn.*, 62: 1, 1948.

25. Ruesch, J., and Bateson, G.: *Psychiatry*, 12: 105, May 1949.
26. Skellern, E.: *Nursing Times*, April-May, 1955.
27. Stanton, A. H., and Schwartz, M. S.: *The Mental Hospital*. New York: Basic Books, 1954.
28. Sullivan, H. S.: *Am. J. Psychiat.*, 10: 977-991, 1931.
29. Wilmer, H. A.: *U. S. Armed Forces Med. J.*, 7: 640, May 1956; 7: 1465, October 1956.
30. Wilmer, H. A.: *Calif. Med.*, 86: 93, Feb. 1957.
31. Wilmer, H. A.: *Mental Hygiene*, 41: 163, April 1957.
32. Wilmer, H. A.: *Graphic Ways of Representing Some Aspects of a Therapeutic Community*. (In press) Walter Reed Symposium on Preventive and Social Psychiatry.
33. Wilmer, H. A.: *Practical Social Psychiatry*, a monograph (to be published by Naval Medical Research Institute, Bethesda, Md.); and *Social Psychiatry in Action*, Springfield, Ill.: Charles C Thomas.
34. Outline to be Used as a Guide to the Evaluation of Treatment in a Public Psychiatric Hospital, Committee on Hospitals, Group for the Advancement of Psychiatry, Report No. 23, July 1953.
35. The Community Mental Hospital, 3rd report of the Expert Committee on Mental Health, W. H. O., Tech. Report Sr. No. 73, 1953.

Acknowledgment: The author is indebted to Rear Admiral B. W. Hogan, Surgeon General, U. S. Navy; Captain George Raines, MC, USN, Chief Neuropsychiatry Branch, U. S. Navy; Rear Admiral D. C. Gaede, MC, (Ret.), USN, formerly Chief of Neuropsychiatry, U. S. Naval Hospital, Oakland; Captain Marion Roudebush, MC, USN, who succeeded him, and LCDR Lina Stearns, NC, USN. The staff of the U. S. Naval Hospital, Oakland, California, particularly Lt. Bethel Greene, NC, USN, nurse in charge of admission ward, also Lt. Dennie Briggs, MSC, USN, clinical psychologist, Mr. Joseph Concannon, Social worker, and the nurses and corpsmen who made the therapeutic community possible.

DISCUSSIONS

MORRIS WEISS, M.D. (Northville, Mich.).—In our own experience of attempting to establish a therapeutic community in a 40-bed closed section in a General V.A. hospital it took at least several months before certain crucial changes could be made. It was difficult for certain staff members to give up their traditional roles. Freer communication between staff members, let alone toward patients, was not easy to establish. The allowing of patients greater participation and decision in their treatment and hospital life was met with resistance. The staff needed to be worked with and supported initially.

For some of our schizophrenics—and this category comprised 70% of our population—the therapeutic community can be a threat as well. The

meaningful involvement of the ambulatory schizophrenic in such a program was our most challenging task. In the schizophrenic there is a tendency to give up normal social roles for the security operations employed in his illness. His relative isolation and need to remain passive militate against active participation. Thus, we accepted the idea of the patient determining the level of his own participation and responsibility within community affairs. Approved social behavior and roles he learned from more intact patients and staff. What may be a therapeutic community for the personality disturbance or neurotic may not be for the schizophrenic.

The importance of the community meetings cannot be overestimated. In our community meetings it was felt that free discussion would lead to a group decision and then to some appropriate action if this was called for. We felt that when a concrete result followed—when, for example, an unnecessary bed time rule was changed or more benches installed in the shower room—the patients felt that their words had meaning and that discussion could lead to favorable changes. This gave substance to the feeling that treatment was patient oriented.

In describing his results Dr. Wilmer states that the patients and staff developed a sense of membership in the community. To explain it he says that there was a carryover for the rest of the day from the morning community meeting. My guess is that membership spirit resulted from something additional. The doctor's own energy, encouragement, and investment in the program can become contagious. Also, there probably was much informal interaction and socialization staff to patient, and patient to patient. It would be nice to have had a description of such interactions as these can be quite significant in the therapeutic community.

The author presents an outline for comparing therapeutic communities. Dr. Wilmer will perhaps agree that a more detailed and comprehensive description of the formal and informal structure of the community will develop. Studies like Devereux's in which he describes the social pattern of a schizo-

phrenic ward or Henry's account of types of institutional structure and how they profoundly influence the milieu come to mind.

I think Dr. Wilmer deserves much credit for his continued search to make "tangible" the essential attributes of the therapeutic community, and we shall look forward to his future reporting as more data are analyzed.

ROBERT A. MATHEWS, M.D. (Philadelphia, Pa.).—I like this paper because Dr. Wilmer has done something that needed doing and has done it well. He puts it aptly when he says the therapeutic community may use all types of therapies "but its basic therapy is milieu therapy—its efforts are not dictated by "humanitarian" purposes but by therapeutic purposes which are humane—it imposes limits on certain forms of behavior, initiating these limits from the members whenever possible—it fosters by every possible means an environment without fear or distrust in which patients feel safe and in which communication is relatively free."

As so clearly demonstrated by Dr. Wilmer, a ward conducted as a therapeutic community becomes a social tranquilizer. Here is an acute service with all types of patients who interact in a therapeutic fashion practically without sedation or restraint. It represents patient management without fear. Why? Because the staff is not afraid of the patients so the patients take their cue from the staff and are not afraid of each other or the new patient who acts in a threatening way.

Dr. Wilmer has also demonstrated that such a therapeutic community can be established and conducted successfully in a rather rigid authoritarian administrative structure such as a military medical service. This being the case it becomes obvious that the same principles and patterns can be adapted to our large state mental hospitals, to private mental hospitals and to psychiatric works in general hospitals. The latter facilities are rapidly becoming the focal points for initial residential treatment in community centers and mental health programs. Having as yet no structure fixed by tradition, these units can most readily adapt to and apply the concepts outlined in this paper.

CLINICAL NOTES

A CONTROLLED STUDY OF THE HABIT FORMING PROPENSITIES OF MEPROBAMATE

JOHN A. EWING, M.D., D.P.M.,¹ AND THOMAS M. HAZLIP, B.S.²

In view of the importance of this subject we are submitting this brief preliminary report.

The earliest reports on meprobamate ("Miltown," "Equanil") stated that the drug was not habit-forming (1, 2). More recently a number of reports have described undesirable side effects as well as instances of excessive self-medication (3).

Probably all drugs used to sedate or to tranquilize can be habit-forming, the patient becoming psychologically dependent upon an effect such as a sense of relaxation or well-being. Of course it is clear that certain patients may develop a dependence upon a non-active drug if there is a suitable psychological meaning of that drug for the patient.

Ewing and Fullilove (3) described a case in which the patient seemed clearly to develop a physiological dependence, and during the first 6 months of 1957 we heard of other instances and observed further examples which suggested to us that a physiological tolerance to meprobamate can occur and that there can be a withdrawal syndrome.

This observation we put to the test in July and August 1957. Seventy-five chronic but cooperative State Hospital patients without history of convulsions were divided randomly into 3 groups. A "double blind" study was conducted with groups of 25 patients receiving respectively identical placebos throughout or meprobamate 6.4 gm. daily or meprobamate 3.2 gm. daily.

Clinical observations and classification as regards the effects of meprobamate and withdrawal reactions were completed before the code was broken. This revealed severe sedative effects at those dosage levels.

During the first three days 35 patients out of 47 showed staggering gait or inability to stand or walk without falling. Other effects included projectional vomiting (4 cases), and urinary and fecal incontinence (4 cases).

After 7 to 10 days most patients were no longer excessively sedated, pointing, we believe, to the occurrence of physiological tolerance.

The three patient groups were continued on the meprobamate or placebos for 40 days at the end of which time all patients were switched to placebo. Clinical observation revealed objective evidence of an abstinence syndrome in 44 out of 47 patients who were previously on meprobamate. Two patients who received placebo throughout (of a total of 24) were suspected of showing an abstinence syndrome because of insomnia alone.

The typical meprobamate withdrawal syndrome included various degrees of insomnia, vomiting, tremors, muscle twitching, overt anxiety, anorexia and ataxia. Eight patients showed a picture of hallucinosis with marked anxiety and tremors much resembling delirium tremens. Three patients developed grand mal seizures.

The effects and the withdrawal syndrome of meprobamate at both dose levels are statistically significant when compared with placebo in this study. We hope to publish the actual figures and further details as soon as possible.

Meanwhile, we feel justified in concluding that meprobamate closely simulates the barbiturates. It would therefore seem wise to start the drug slowly and to discontinue it slowly in order to prevent the occurrence of withdrawal symptoms.

A more refined study of this problem is planned and will be reported when completed.

We are grateful for the support of Wyeth Laboratories and for the cooperation of the Superintendent and staff of the State Hospital at Raleigh, N. C.

BIBLIOGRAPHY

1. Selling, L. S.: J.A.M.A., 157: 1594, 1955.
2. Lemere, F.: Northwest Med., 54: 1098, 1955.
3. Ewing, J. A., and Fullilove, R. E.: N. Eng. J. Med., 257: 76, July 11, 1957.

¹ Assistant Professor of Psychiatry.

² Senior Medical Student, University of North Carolina School of Medicine, Chapel Hill, N. C.

VASOLASTINE IN THE TREATMENT OF ARTERIOSCLEROSIS

A. J. NOORDSIJ, M.D.,¹ AND JACKSON A. SMITH, M.D.²

A preparation (Vasolastine³) containing a rather formidable number of lipotropic enzymes, as well as two proteolytic enzymes active in the metabolism of amines, was evaluated clinically following an earlier animal study.

These enzymes are obtained from Crucifer seeds and contain the following systems: fatty acid activator, co-enzyme A, acyl dehydrogenase, cleavage and condensing enzymes, adenosine triphosphate, dephosphopyridine nucleotide, and cholesterol esterase; in addition, amino acid-oxidase and tyrosinase-tryptase were included.

This study was initiated following encouraging therapeutic reports in the literature.

Twelve patients were included in this series; 6 were diagnosed chronic brain syndrome associated with cerebral arteriosclerosis, the other 6 were classified as chronic brain syndrome associated with senile and presenile brain disease with circulatory disorders. The patients were transferred either from an admission ward or from a state hospital to a research ward. Personnel were available to provide special occupational and recreational therapy for a geriatric group. The nursing care was sufficient to train and encourage the patients to fit into an active ward routine. The preparation was given intramuscularly over a period of 30 to 90 days in a dosage of 2 cc. three to seven times a week.

¹ Resident Psychiatrist, Nebraska Psychiatric Institute, Omaha, Nebr.

² Director of Research, Nebraska Psychiatric Institute, Omaha, Nebr.

³ This preparation was generously supplied by Polypharm N.V. (P.B. 6025, Rotterdam, The Netherlands).

In addition to repeated psychiatric evaluations, physical and neurological examinations, and psychological testing, roentgenograms of the thorax, electrocardiograms and electroencephalograms were made at regular intervals. Blood pressure readings were recorded daily. Urinalyses, complete blood counts, and blood sedimentation rates were done routinely. Serum cholesterol and lipoprotein determination were carried out.

The medication was well tolerated; the only undesirable side effect was a leukopenia which occurred in one patient after 30 days of treatment, with a prompt recovery following discontinuation of the medication.

Behaviorwise, the results were encouraging since the majority of the patients in both diagnostic categories showed more interest in self and in their environment. Subjectively there appeared to be an improvement in mood with a decreased frequency of somatic complaints. The patients' relatives were encouraged by the change in the patients' appearance and showed an increased interest, visited more frequently, and became more accepting of the patient. In 4 cases this led to the patients being either returned to the home or being placed in a nursing home rather than being returned to the state hospital.

Objectively, there were no significant changes in any of the measures taken. Arteriosclerosis as measured by lipoprotein and cholesterol determinations was not materially affected by the preparation. It was concluded that the desirable behavioral changes observed resulted from the increased care, attention and activity following transfer to the research ward, rather than a specific effect of the preparation being administered.

SIMPLIFYING CHLORPROMAZINE MAINTENANCE THERAPY

ELSE B. KRIS, M.D.¹

Clinical experience has demonstrated that certain patients treated with chlorpromazine during their hospital residence, require main-

tenance therapy when returned to the community in order to prevent a relapse. Such maintenance therapy has proved to be necessary in those cases where the duration of illness is a longer one. Some cases, however,

¹ Aftercare Clinic, 2 West 13th St., New York 11, N. Y.

although of a more acute nature, still require maintenance therapy if the stress situations in the environment are considerable. It has been observed in general that the excitement of coming home and having to adjust to the outside world is frequently better tolerated, even in acute cases, if maintenance therapy is started for at least the first few weeks after which it can be discontinued.

Patients who have had a longer duration of hospitalization, or those who had several hospital admissions, require to be kept on a maintenance dosage as they otherwise show, sooner or later, recurrence of symptoms.

Such maintenance therapy has to be individually adjusted to the needs of each patient and continued in some cases for a prolonged period of time, in some others indefinitely.

It was occasionally observed that patients starting employment are under considerable tension which might interfere with their sleep. Here, too, maintenance therapy over the first few weeks helps a great deal in work adjustment.

In all these cases it was found that patients who returned to the community and were on medication more than once or twice

a day would either forget to take the medication or would feel embarrassed by having to take it while being watched by others at work or socially. Taking pills on the job left the patient open to questioning and involved uncomfortable explanations or evasions. To avoid this the use of a sustained release capsule containing chlorpromazine, the spansule form of the drug, which provided medication for a period of about 12 hours with one dose, has been tried. This enables the patient to omit the inconvenience of the mid-day dose and also insures a more even distribution of the effect of the drug.

Moreover, it has been observed in a number of cases that this method of chemotherapy has a beneficial effect on the patient's sleep cycle. This was particularly true in those patients who previously had complained while receiving regular chlorpromazine medication at hour of sleep, about nightmares, particularly prominent during the hours of waking early in the morning. These patients, when receiving the spansule form of the drug at bed-time, reported that they now were able to sleep soundly all through the night and no longer were disturbed by nightmares.

THE COMBINED USE OF A TRANQUILIZER,¹ SYMPATHOMIMETIC AND VITAMINS IN THE TREATMENT OF ELDERLY PSYCHOTIC PATIENTS²

LIONEL H. BLACKMAN, M.D.,³ ABRAHAM GLENN, M.D.,⁴ AND LEON OLINGER, M.D.⁴

Our recent study at Brooklyn State Hospital considered one of the major problems in psychiatry today, namely: the treatment of the aged psychotic patient. Physical debility was taken as a major consideration as

well as psychiatric symptoms and sensorial changes.

The medication used was a combination of previously proven therapeutic ingredients now combined to modify and eliminate undesirable side effects. A therapeutic dosage of vitamins was utilized in consideration of the patients' nutritional state. Reserpine (1), one of the best tranquilizers, was employed to reduce agitation and anxiety; d-amphetamine sulfate was employed as a psychomotor euphoriant to prevent "overtranquilization" often seen with prolonged use of Rauwolfia alkaloids. This preparation, besides giving the expected results of each of the constituent drugs, seemed to suggest a clinical synergism.

A total of 140 elderly psychotic patients

¹ A combination of reserpine, d-amphetamine sulfate, and a therapeutic vitamin formula. This preparation was developed and supplied by Premo Pharmaceutical Labs., Inc., 111 Leuning Street, South Hackensack, N. J., under the name Vita Respal.

² The authors wish to express their appreciation to Dr. N. Beckenstein, Senior Director of Brooklyn State Hospital, for his cooperation in making this project possible, and Dr. H. Perlowitz for his valuable work on controls.

³ Lakeville Medical Center, New Hyde Park, N. Y.

⁴ Supervising Psychiatrists at Brooklyn State Hospital, Brooklyn, N. Y.

were used in this study. The ages varied between 47 and 95, averaging 70. The diagnoses were as follows; senile psychosis 71, psychosis with cerebral arteriosclerosis 28, dementia praecox 10, manic depressive psychosis 6, involutional psychosis 10, psychosis due to syphilis 3, alcoholic psychosis 2, post-traumatic psychosis 1. All of these elderly psychotic patients had a relatively poor prognosis and were unlikely to reveal any sudden changes.

The medication which consisted of a therapeutic vitamin formula, reserpine .25 mg. and d-amphetamine 5 mg., was administered three times a day. The group of patients was divided into two main subdivisions, 73 of whom received the medication and 67 of whom received placebo. A double blind technique was utilized so that neither the individuals administering the drug nor the patients knew who was getting medication and who was receiving placebo. The placebo and drug appeared identical.

Our studies ran for a total of 10 weeks. Each item in the protocol was graded as follows: 3 plus—greatly improved, 2 plus—moderately improved, 1 plus—slightly improved, 0—no change. All improvements were then added and contrasted with the results of the placebo group. A summary of our findings showed the following improvements (figures for the control group in parentheses): Nutrition, 86% (19%); Sphincter Control, 27% (8%); Muscle Strength, 39% (30%); Sociability, 67% (30%); Co-

operation, 50% (10%); Activity, 56% (17%); Initiative, 45% (13%); Self-Care and Appearance, 41% (10%). No side effects were noted and there was very little fluctuation in blood pressure.

The new drug presented, a combination of reserpine, dextro-amphetamine sulfate and therapeutic vitamins was a logical combination of previously proven therapeutic ingredients which have been utilized in treating many of the symptoms of the geriatric patient. Clinical observations seem to indicate a synergistic action, perhaps because the improvements of the patients' physical debilities enhance utilization of the dextro-amphetamine sulfate and the reserpine, or perhaps because the improvements in the patients' mood and cooperation due to the dextro-amphetamine and reserpine enable them to better metabolize their nutriment. The resultant improvements become more significant in their import when we consider the double blind placebo technique utilized. We feel these results are most encouraging for further use of the drug in elderly psychotic patients, and for the geriatric patient seen in private practice (2), who perhaps is not so severely ill as the hospitalized patients in our study.

BIBLIOGRAPHY

1. Renaldi, F., Rudy, L. H., and Himwich, H. E.: *Am. J. Psychiat.*, 112: 678, March 1956.
2. Epstein, I. L.: Use of Vita Respal in private practice. Personal communication.

CLINICAL NOTE CONCERNING IPRONIAZID (MARSILID)

ROBERT R. SCHOPBACH, M.D.¹

In an effort to determine the efficacy of iproniazid in the treatment of depressions, it has been administered to selected cases and compared with the effects of other medications as well as with a placebo. Although it is recommended to elevate mood and to stimulate appetite, it was not used in the severely depressed individual where electroshock therapy is known to be very efficacious. It was given concurrently with electroshock therapy in a number of other cases. It is impossible

to accurately estimate its effects separately, but it was the impression that it did exert a beneficial effect upon the mood of the individual, both during and subsequent to the treatments. There are, however, many individuals who are depressed to a lesser degree, but whose adjustment and enjoyment of life are impaired. The group reported here is comprised of 15 such ambulatory depressive patients. The initial dose of the medication was 50 mgs. 3 times a day. This was given without any "sales talk" or comment other

¹ Henry Ford Hosp., Detroit, Mich.

than "I think this medicine may help you." After 2 to 4 weeks the dosage was reduced to 25 mgs. 2 to 3 times a day, and after 2 or 3 months this was gradually discontinued. Beneficial effects were reported within the first one to two weeks, and further improvement was noted up until 3 months in some cases. The results are reported as to the degree of improvement and the psychiatric condition underlying the depressive reaction.

Seven showed and reported considerable improvement. Six were chronic neurotics while one was depressed following Rauwolfia therapy and had only partially been helped by Ritalin. One to two months later these patients reported, "I felt like my old self," "vastly improved," or "perfect now."

Three were somewhat improved. Of these one was a neurotic depressive, one a schizoid personality, and one a cyclothymic personality. Eight of these 10 patients showing improvement had not improved on previous placebos or other medications.

Four were essentially unaffected. Two

schizoid persons with depression improved, but felt similarly improved by placebos. One with chronic brain syndrome was unaffected by ipromiazid as well as by other drugs. One obsessive neurotic became more energetic on the placebo and, in addition, felt less tense when taking the drug.

Only one obsessive neurotic stated that not only was he unimproved but that he also seemed to have less appetite. There were no other complaints of any side-effects and no one discontinued the drug for such a reason.

This group is obviously too small to be statistically significant due to the selection of only moderately depressed individuals and the use of controls. Nevertheless, the results of this 6 months observation suggests that psychoneurotic depressive reactions may be greatly benefited by this medication, whereas the schizoid individuals with depression are not so greatly benefited. This selection of patients may account for the difference in the results reported here, compared with the report of F. J. Ayd (*Am. J. Psychiat.* 114:459).

TWO YEAR FOLLOW-UP STUDY OF THE RELATIONSHIP OF CHLORPROMAZINE AND THE INCIDENCE OF CONVULSIONS IN FIFTY POST-LOBOTOMY PATIENTS

A. E. PAGANINI, M. D., AND M. ZLOTLOW, M. D.¹

Epileptic convulsions as a complication of chlorpromazine have been described by many authors (4, 5, 6, 7, 8). This study covers the possible epileptogenic effect of chlorpromazine on 50 post-lobotomy patients treated and observed for a period of 2 years. All of these patients were on the male chronic service of Pilgrim State Hospital and all were diagnosed as chronic schizophrenics. All of these patients had been continuously hospitalized since their lobotomy which was done at least 2 years prior to the onset of the study by the same neurosurgeon using the same classical technique.

Twenty-five post-lobotomy patients who had convulsions at one time or another were compared with 25 post-lobotomy patients who had not at any time had convulsive seizures. Chlorpromazine was given to both

groups. All of the first group (convulsive group) were continued on predetermined optimal anti-convulsive medication while the second group (non-convulsive group) received no added anti-convulsants. The only change in the routine of the patients involved in the study was the addition of chlorpromazine in doses varying from 200 to 800 milligrams daily.

RESULTS

In the first group of post-lobotomy patients, that is, those who had seizures at one time or another before chlorpromazine, 9 continued to experience seizures after the institution of chlorpromazine. In 5 of these patients, it was noted that the seizures had occurred as recently as 3 months before the institution of therapy and occurred 2 to 4 weeks after the institution of chlorproma-

¹ Pilgrim State Hospital, West Brentwood, N. Y.

zine therapy. Two of these 5 patients developed a status epilepticus late after the institution of chlorpromazine; one of which had never had "status" before. It must be emphasized that the rest of the patients in this group, that is, 16, did *not* develop convulsions at any time even after the sudden withdrawal of chlorpromazine. It must also be emphasized that all in this group continued on anti-convulsants, and none was considered well enough for release on convalescent status. In the second group of post-lobotomy patients, that is, those who at no time had any convulsions, *no* convulsive seizures developed during 2 years of observation. None of the patients developed fits after the sudden withdrawal of chlorpromazine. None was given anti-convulsants at any time. However, one of these patients died suddenly. No autopsy was performed and the assumption was made that the patient sustained an acute coronary occlusion although the remote possibility of a "masked fit" was entertained. This constituted the only questionable convulsion which occurred during chlorpromazine therapy in this group. Two of the patients in this group were released on convalescent status and to date are making a satisfactory social adjustment.

DISCUSSION

Initially, the impression was gained that chlorpromazine was epileptogenic because of isolated instances of convulsive seizures developing after the institution of therapy. It was speculated that the scar produced by the lobotomy was enough to predispose a patient to develop fits and that the drug acted as a trigger. However, as the study progressed, it became obvious that only in those patients who had had convulsions prior to the institution of chlorpromazine did convulsions develop and then in only 9 of the 25 patients. Even in these 9, the number of fits seemed to diminish the longer the chlorpromazine was continued. Also, it was felt that the anti-convulsants should be continued at the previous optimal levels in order to give the patients maximum protection from the development of an increase in convulsions. In only one instance where a status epilepticus

developed in a patient who had previously never had one was there a question as to the worsening of the patient as far as epileptic convulsions were concerned. Even in this case, however, chlorpromazine is still continued with caution but without fear. Most important, of the patients who had never had convulsions, despite the absence of anti-convulsants, none developed convulsions while on chlorpromazine, with the possible exception of the case of sudden death which could have been a "masked fit."

CONCLUSIONS

Our 2 year follow-up study of 50 post-lobotomy patients and the incidence of convulsions with chlorpromazine therapy reveals the following conclusions:

1. Chlorpromazine did *not* increase the frequency of convulsions in post-lobotomy patients who have a convulsive background.
2. In post-lobotomy patients who never had convulsions, chlorpromazine *did not* produce convulsions but the possibility of a "masked fit" in one case of sudden death must be entertained.
3. In patients who have a history of convulsions, the seizures seemed to occur within 2-4 weeks of the institution of therapy but the number of fits seems to be decreasing. This may indicate a probable synergistic action between the anti-convulsants and chlorpromazine.
4. Anti-convulsants should be continued while the patient is on chlorpromazine if there is a history of convulsions.
5. In our opinion, there is no contra-indication or risk in the use of chlorpromazine for the relief of psychotic symptoms in post-lobotomy patients providing convulsive patients are continued on anti-convulsants.

BIBLIOGRAPHY

4. Schlichter, *et al.*: *Can. M.A.J.*, 74:364 (1956).
5. Szatmari, A. *J. Psychiatry*, 112:788 (1956).
6. Bonafede, V. L.: *Arch. Neurology and Psychiatry*, 74:158 (1955).
7. Hankoff, *et al.*: *N. Y. State J. Med.*, 57:18, Sept. 1957.
8. Liddell and Ritterstol: *J. Neurol., Neurosurg. and Psychiat.*, 20:2, May 1957.

TREATMENT OF PSYCHIATRIC DISORDERS WITH TRIIODOTHYRONINE

FREDERIC F. FLACH, M. D.,¹ CHARLES I. CELIAN, M. D.,¹ AND RULON W. RAWSON, M. D.²

Psychopathologic changes have been described in patients with hyperthyroidism and myxedema. Several studies of schizophrenic patients have indicated low basal metabolic rates and resistance to large doses of thyroid hormone. Such observations suggest that, in selected psychiatric disorders, products of intermediary thyroid metabolism, such as triiodothyronine and the acetic and propionic acid derivatives of thyroxin and triiodothyronine, may have beneficial therapeutic effects.

Triiodothyronine was administered to a series of 24 psychiatric patients, 5 male and 19 female, hospitalized at the Payne Whitney Psychiatric Clinic. Three patients were under 20 years of age, 15 between 20-39, and 6 over 40. None demonstrated endocrinologic or cardiovascular disease after thorough physical and laboratory examination. The duration of illness ranged from 4 months to 25 years, with a median duration of 18 months. Seventeen patients were diagnosed as schizophrenic reactions: 5 simple, 5 paranoid, 2 catatonic and 5 undifferentiated. Three were diagnosed as depressive reactions, 2 as paranoid reactions, 1 as a severe, chronic obsessive-compulsive reaction, and 1 as anorexia nervosa with marked obsessive-compulsive features.

The most frequent and marked psychopathologic manifestations in this group included diminished emotional responsiveness associated with lack of spontaneity, apathy and social withdrawal; depersonalization; absence of sexual interest; depression of mood; and specific obsessive-compulsive symptoms.

Oral doses of 100 micrograms of triiodothyronine were administered daily for one week. The dose was then increased to 200 micrograms daily for two weeks, reduced to

100 micrograms daily the fourth week, and subsequently terminated. Headaches and palpitations were the leading side-effects, usually disappearing after the initial week of treatment.

During the study the patients were observed by their individual psychotherapists, research psychiatrists, and the nursing staff who maintain continuous behavioral charts on all inpatients. Of the 24 patients, only 1 did not change. Nine patients demonstrated clinical changes, without significant improvement in their basic psychopathologic conditions. Seven patients improved moderately, and 7 improved markedly. Of the 23 patients who showed some degree of change, 16 changed psychopathologically while receiving triiodothyronine, while 4 did not improve until shortly after the termination of treatment. The remaining 3 patients improved somewhat on the drug, experienced a 5 day period of emotional upheaval immediately after termination, and then proceeded to improve markedly thereafter.

The pattern of emotional change appeared to be well-defined. Uniformly and without exception diminished emotional responsiveness, denial, dissociation of affect and depersonalization were reduced or disappeared entirely, and spontaneous activity increased. Productivity in psychotherapeutic interviews increased substantially. Depression of mood was alleviated in the majority of cases, especially when the increase in emotional reactivity was accompanied by a moderate or marked degree of general symptomatic improvement. Obsessive-compulsive symptoms were significantly reduced. The one case of anorexia nervosa distinctly improved. Most interesting was the observation that more than two-thirds of the patients demonstrated previously hidden or absent sexual feelings and hostile emotions on triiodothyronine. The most marked changes were noted among the schizophrenic and psychoneurotic groups, except for the paranoid schizophrenic reactions. The latter, as well as the paranoid reactions and depressive re-

¹ From the Department of Psychiatry, Cornell University Medical College, and the Payne Whitney Psychiatric Clinic of the New York Hospital, New York, N. Y.

² From Memorial Center and the Division of Clinical Investigation of the Sloan Kettering Institute, New York, N. Y.

actions, did not show any change in their basic conditions, although associated features, such as depersonalization and denial, were reduced.

The mechanism of action of triiodothyronine is evidently complex. Undoubtedly it influences total endocrine balance. It may directly stimulate emotions and instinctual drives, or it may increase alertness and broaden the scope of consciousness, thereby allowing previously repressed or suppressed feelings to reach awareness.

Triiodothyronine appeared to be qualitatively different from and quantitatively more

effective than either the acetic or propionic acid derivatives in producing emotional changes. These compounds were studied in a smaller series of patients given doses which calorigenically were only a fraction of the doses of triiodothyronine used.

The clinical use of these thyroid hormones in the treatment of psychiatric disorders must be considered to be in an experimental phase of development. Further experience will be essential to clarify their therapeutic potentials and such technical factors as dosage requirements and optimal duration of administration.

HISTORICAL NOTES

THE FIRST PROFESSOR OF PSYCHIATRY— SAMUEL MITCHEL SMITH

PHILIP C. ROND, M.D.¹

The American Journal of Insanity, in October, 1847, noted the first appointment of a professor of psychiatry in a medical school in the United States as follows:

We are gratified to learn that a Professorship of Insanity has been established at one medical school. The Willoughby University, Columbus, Ohio, has appointed Samuel M. Smith, M.D., Professor of Medical Jurisprudence and Insanity. We think there should be a distinct course of lectures on medical maladies at every medical school. Dr. Smith has some practical knowledge of insanity, having been an assistant physician at the Ohio Lunatic Asylum for several years^(1,2).

Dr. Samuel Mitchel Smith was born in Greenfield, Ohio, November 26, 1816. The historic, two-story house occupied by his family at the time of his birth still stands. He obtained his early education in private schools and from his father, who was a Presbyterian minister. He obtained his A.B. degree from Miami University, Oxford, Ohio, in 1836. Following this, he was principal of an academy at Rising Sun, Indiana. This position he obtained through the help of his friend William Holmes McGuffey, Professor of Latin and Greek at Miami University and the man whose name was a household word among several generations of Americans because of his authorship of the McGuffey Eclectic Readers.

Dr. Smith read medicine while at Rising Sun under Dr. John Morrison. He attended two sessions of medical lectures at the medical college of Ohio in Cincinnati and obtained an M.D. degree from this college in 1839⁽³⁾. He enrolled at the University of Pennsylvania Medical School, Philadelphia, in 1839 and one year later, in 1840, received his second M.D. degree.

He came to Columbus in 1840 and took a job as assistant physician at the Ohio Lunatic Asylum (Central Ohio Hospital for the

Insane), under the supervision and direction of Dr. William Maclay Aul, (second President of The American Psychiatric Association, 1848-1851)⁽⁴⁾. He remained at this position for approximately 3 years, or until 1843 when he resigned to open up a private practice of medicine.

On February 19, 1847, the trustees of the medical department of Willoughby University met in Columbus. They resolved to move the medical department of this university to Columbus, Ohio. They subsequently declared all chairs vacant in the medical department and appointed a new group of men to fill the vacated chairs. Among those appointed unanimously was Samuel Mitchel Smith, M.D., to the chair of Medical Jurisprudence and Insanity.

In 1848 the Starling Medical College was founded (Willoughby College merged with it). At this time Dr. Smith was honored with two appointments. He was appointed a member of the Board of Trustees by Mr. Lynn Starling, the benefactor of the Starling Medical College; he was also made Professor of Materia Medica and Therapeutics, in addition to his previous appointment as chairman of the section on Medical Jurisprudence and Insanity. He was appointed the second dean of the Starling Medical College in 1849 and maintained this position until 1858. He resigned at this time only to return for a second term as dean from 1861 to 1865. Starling Medical College eventually became Ohio State University College of Medicine^(5, 6, 7).

The Ohio Medical and Surgical Journal, Vol. 1, 1849, contained the following notice about Starling Medical College—

the annual course of lectures will commence on the first Wednesday in November—next (November 7, 1849) and will continue sixteen weeks. The preliminary courses will commence on the first Wednesday in October during which month there will be three lectures daily. In October, the follow-

¹ Dept. of Psychiatry, Ohio State University, Columbus, Ohio.

ing subjects will be taught: Minor Surgery, Dr. Howard; Insanity, Dr. Smith; Poisons (illustrated by experiments on lower animals), Dr. Carter; Microscopic Anatomy, Dr. Gay; Physical Diagnosis, Dr. Butterfield. Signed, S. M. Smith, Dean of the Faculty.

In 1850, it appears, there were no longer any distinct chairs of Insanity in any medical college in the United States, according to Dr. Edward Mead, who was editor of the *American Psychological Journal* (8). Dr. Mead stated in its last issue, which was published in November, 1853, "Dr. S. M. Smith, of the Starling Medical College, having sometime since been transferred to the Chair of Theory Practice, we believe there is now no distinct Professor of Insanity. This is a serious defect in the course of instruction provided by medical colleges." In 1859, Governor Salmon P. Chase appointed Dr. Smith Surgeon-General of the State of Ohio, which post he held under Governors Dennison and Tod. He was also appointed by Governor Chase as a trustee in the Central Ohio Lunatic Asylum, in which capacity he served for 18 years. Dr. Smith was one of the original anti-slavery men in the State of Ohio. He was one of the first in this part of the country to join the Republican Party. He was familiar with the Bible, and was seldom at a loss for a quotation therefrom. He was the first doctor in Columbus to administer chloroform to a woman in labor. In 1870, 4 years before his death, the transactions of the Ohio Medical Society show that he was still interested in psychiatry as he was appointed to a special committee to examine the Plea of Insanity in Cases of Homicide.

During the Civil War he was a member of the Board of Examiners of Army Surgeons at Camp Chase, located on West Broad Street in Columbus, Ohio. After the war, he was appointed a member of the Board of Examiners of Pensions. Doctor Smith was the twenty-fifth president of the Ohio State Medical Society (Association), holding office in 1869-70. He presided at the twenty-fifth, or silver anniversary meeting of the society which met in Cleveland on June 14-16, 1870.

Dr. Smith has been overlooked by those writing on the history of psychiatry in America because he was not a man to publish scientific works. Although he had considerable fame locally, he was never apparently too famous on the national scene. There is a statue to his memory standing on the grounds of the City Health and Safety Center Building in Columbus, Ohio. This statue is approximately 77 years old and once stood in the town square in Columbus, Ohio.

BIBLIOGRAPHY

1. Miscellaneous, *Am. J. of Insanity*, 4:2, 181, Oct., 1847.
2. Edwards, Linden F.: *Ohio State Journal*, 51: 5, 455, May, 1955.
3. Kelly, Howard A.: *Cyclopedia of American Medical Biography*, Vol. 2. Philadelphia: W. B. Saunders Co. 1912.
4. Rond, Philip C.: *Ohio State Med. Journal*, 51:9, Sept. 1955.
5. Reamy, Thad A.: *Transactions Ohio Medical Society*, 1876.
6. *Ohio State University College of Medicine, A Collection of Source Material*, Volume 1, 1934.
7. Forman, Jonathan, Personal Comm.
8. Carlson, Eric T.: *Historical Notes, Am. J. Psychiat.*, 113:567, Dec., 1956.

CORRESPONDENCE

CHRONIC PSYCHOSIS FOLLOWING EPILEPSY

Editor, THE AMERICAN JOURNAL OF PSYCHIATRY:

SIR: I would like to comment on the article by Dr. Bartlet on "Chronic Psychosis Following Epilepsy" in the October, 1957 issue of *The American Journal of Psychiatry*.

The problem of schizophrenia occurring in the epileptic patient has long been of interest to me. It is difficult, if not oftentimes impossible, to differentiate schizophrenia in the non-epileptic from schizophrenia developing in the epileptic patient. I have observed religious preoccupations with Messianic delusions in the epileptic patient with schizophrenia to be more frequent than in Dr. Bartlet's series of cases and also that impulsive actions, either homicidal attempts or destructiveness of property, occur more often in these people than in the non-epileptic schizophrenics.

Dr. Bartlet's observations of the rarity of depressive psychoses in epileptics was not corroborated by a recent study of admissions to the Psychiatric Division of the Kings County Hospital Center, Brooklyn, New York. During the first 8½ months of 1957 there were 15 known epileptic patients who developed a functional psychosis after having suffered from epilepsy for at least 5 years. Of the 15 patients, 7 were moderately to markedly depressed (3 of these being diag-

nosed as suffering from an involutional psychotic reaction and 1 from a psychotic depressive reaction). There were 2 markedly depressed schizophrenic patients who had attempted suicide.

Consideration must be given to diagnostic groupings between any two hospital populations. Dr. Bartlet's figures, derived from the Bethlem Royal and Maudsley Hospitals, London, England, for the 1949-53 period, contrast sharply with the January 1-September 15, 1957, admissions to the Psychiatric Division of the Kings County Hospital Center. The English hospitals had 167 schizophrenic patients and 121 manic-depressive reaction patients admitted. During the above mentioned 8½ month period Kings County Hospital Center had admitted 2,118 patients with schizophrenic reactions and only 33 patients with manic-depressive reactions. The hospital records for the past 5 years show about the same proportion of schizophrenic and manic-depressive patients. This striking difference is only partly accounted for by hospital selectivity of patients, genetics, and other factors. The utilization of more subtle dynamic and clinical clues by the psychiatrists may be an important factor in the contrasting statistics between both hospitals.

IRVING J. FARBER, M.D.,
Forest Hills, New York.

REPLY TO THE FOREGOING

Editor, THE AMERICAN JOURNAL OF PSYCHIATRY:

SIR: Thank you for the opportunity to comment on Dr. Farber's letter.

Most of the discrepancies between Dr. Farber's experience and mine are due in my opinion to the difference in the type of patient referred to the Bethlem Royal and Maudsley Hospitals on the one hand and the Kings County Hospital Centre on the other. The former hospitals admit patients only considered to have a relatively good prog-

nosis, while I imagine the latter Centre copes with the general run of psychiatric illness both acute and chronic. The utilization of more subtle dynamic and clinical clues by one of the groups of psychiatrists concerned may be a factor, but if an additional factor is required I would consider that the use of different diagnostic criteria was more important.

Dr. Farber's reference to depression in his group of patients is in no way contradictory to my findings unless he excludes all those

that could be diagnosed as suffering from schizophrenia by my criteria and all patients who have not had delusions for a period of at least one year. Nevertheless, I find it interesting that he found such a high percentage of depressed patients in his group,

especially as they came from a psychiatric population in which affective disorder occurred so infrequently.

J. E. A. BARTLET, M. D.,
Park Prewett Hospital,
Basingstoke, England.

SIMULATED RETARDATION

Editor, THE AMERICAN JOURNAL OF PSYCHIATRY:

SIR: Emotional deprivation in early childhood is a well known cause of simulated retardation. At the present time the idea of functional retardation (as shown by psychological testing) with better or normal inherent capacities is expressed by such terms as "pseudo-retardation," "apparent feeble-

mindedness," or "mental deficiency" or other similar combinations.

I suggest that these cases be called "*dysmentia*" to indicate disturbance in mental functioning as it applies to the intellectual sphere, and which may be temporary.

This would give a more hopeful attitude towards such patients and *ipso facto* call for further follow-up and/or testing.

IRWIN J. KLEIN, M. D.,
Brooklyn, New York.

PSYCHICAL RESEARCH

Editor, THE AMERICAN JOURNAL OF PSYCHIATRY:

SIR: Please permit me a brief protest about the review of Dr. Thomas Szasz of *Psychical Research* by Dr. Raynor C. Johnson. This appeared in the November issue of The American Journal of Psychiatry.

Dr. Szasz's review seemed to reproach Dr. Johnson with including "no new data" beyond that already available. *Psychical Research* was written and presented as a brief condensation and summary of data published elsewhere. No popular introduction to physics or biology contains new data and none are expected to. Why should this be required of a similar book on psychical research?

But I am chiefly concerned with Dr. Szasz's sweeping condemnation not merely of Dr. Johnson's little introduction to psychical research, but of the entire subject itself. Dr. Szasz writes as if none of the facts adduced by psychical research deserve any interest for themselves as facts to be explained and understood. He assumes that psychical research is a subject for psychopathology to study and does not consider that it might contribute to psychopathology and psychiatry. In this position Dr. Szasz is not alone

but neither are psychical researchers any more. For a great many scientists eminent in other fields, as Dr. Johnson is in physics, have examined the data of psychical research and have become impressed not only with the actuality of many of the reported observations but also with the importance of their further study. The interest of eminent scientists itself provides no clue to the veridicality of any evidence. But it can, I think, make unreasonable the epithets such as "paranoid pseudoscience" applied to psychical research by Dr. Szasz. In this respect I think Dr. Szasz's review bad criticism. For it constitutes a kind of censorship by presenting a one-sided account not merely of a single book but of a whole subject. This is, to vary a well-worn phrase, throwing out not merely the baby and bathwater but the mother also from whom might be born other babies.

In its brief history psychical research has suffered considerably from charlatans and too credulous investigators who were easily persuaded that they have seen what they expected and wanted to see. But it has suffered hardly less from uninformed and too incredulous critics whose prejudices have closed their minds to any new conceptualizations of our universe.

Between these fanatical extremes serious psychical researchers pursue a slow and slowly rewarding course of investigation. These few lines can add nothing to the merits of their work, but will, I hope, remind the editors of *The American Journal of Psychi-*

atry that reviews such as Dr. Szasz's run against the JOURNAL's tradition of fair criticism.

IAN STEVENSON, M. D.,
Univ. of Virginia School
of Medicine.

REPLY TO THE FOREGOING

Editor, THE AMERICAN JOURNAL OF PSYCHIATRY:

SIR: Many thanks for inviting me to reply to Dr. Stevenson's criticism of my review of Dr. Johnson's *Psychical Research*. As I see it, Dr. Stevenson objects to my review on two distinct grounds. First, he appears to hold that psychical research in general, and this book in particular, has more scientific merit than I said it had. Secondly, he states that my review was unfair. I would like to deal with these two issues separately.

In regard to the scientific aspects of this matter, I had frankly stated my position toward this subject at the beginning of my review. I then cited illustrative passages from the book and concluded with some brief *logical arguments* concerning the problem at hand. I have set forth in greater detail elsewhere what I thought was "wrong" with most of the work in parapsychology ("A Critical Analysis of the Fundamental Concepts of Psychical Research," *Psychiat. Quart.*, 31: 96-108, Jan., 1957). Dr. Stevenson cites no evidence—factual or theoretical—in support of his own position. He simply advocates adhering to the golden mean, and proposes to steer a middle course between what he calls "charlatans" on the one end, and "uninformed critics" on the other. I am reminded in this connection of Edward Glover's witty comments about eclecticism which, he said, "is generally regarded as a form of objectivity, reflecting credit on those who cultivate it. This is a view which the casual reader, always inclined to see fair play and confusing eclecticism with impartiality, feels strongly disposed to support. Believing that there must be at least two sides to any question, he finds it hard to conceive that one side may rest on total error" (E. Glover: *Freud or Jung?*, New York: Meridian Books, 1956, p. 187).

Concerning Dr. Stevenson's second charge, namely that of unfairness on my part, I would like to say this. What constitutes "fairness" and "unfairness" in the evaluation of scientific works in scientific journals—much like the rules governing all forms of social behavior—is subject to considerable variation from time to time, and from person to person. His criticism, on this ground, may therefore simply express a difference of opinion, or personal style, between us. I wished to be "fair" and I thought I was. No doubt, however, I interpreted this word, in my own way. Thus, I thought I merely "criticized" Dr. Johnson's book, but Dr. Stevenson states I "condemned" it. Similarly, I did not apply the epithet of "paranoid pseudoscience" to psychical research—as Dr. Stevenson states—but wrote as follows: "Human activities having some pertinence to this problem (*i.e.*, the problem of object loss and our attempts to solve or master it) thus encompass, among others, science, religion, fiction and paranoid pseudoscience. This book, and many others dealing with "psychical research," may be regarded, therefore, as posing an interesting—and perhaps for some people, an important—challenge in distinguishing between good science, bad science, science fiction and paranoid system building."

Clearly, while I brought up the notion of "paranoid pseudoscience" in connection with the subject at hand, I did not apply it *specifically* to psychical research. If the shoe does not fit, why put it on? Personally, I am prepared to entertain that any particular work may fit into one of these categories whether it is propounded in cancer research, psychoanalysis, parapsychology, or any other area of inquiry. And I meant to imply this much in my review. In science, nothing is safe from doubt. And I merely said that I doubted almost everything in psychical research. If to say directly what one thinks,

and to support one's position by means of logical arguments, is unfair—so be it.

Still, how a review such as mine can constitute a "kind of censorship," I cannot see. Indeed, since Dr. Stevenson's criticism of my comments is essentially an *ethical* one, I would like to conclude on a frankly ethical note. Surely, the ethics of proper scientific criticism have not been defined for all time to come. Personally, I try to hew close to the lines of what is perhaps a romantic scien-

tific ethic, according to which a good critic is one who states clearly what he thinks of a piece of work and gives the reasons for his views. If my work were treated in this way, I would consider it "fair" criticism.

I appreciate your courtesy for allowing me to reply at such length.

THOMAS S. SZASZ, M. D.,
Upstate Medical Center,
Syracuse, New York.

COMMENT

A REALISTIC APPROACH TO TRAINING RESEARCH PERSONNEL

Scarcity of high grade professional personnel exists everywhere in psychiatry, but in no area is it more apparent or problematic than in psychiatric research. Interest and devotion to clinical psychiatry is abundant and the rewards quite equivalent. But research workers, like educators, still trudge the path of the poor cousin through fields of plenty. Questionable financial security is not the only responsible road block however in advancing recruitment of the research-minded. There are a number of policy changes, positive in type, which would improve present situations.

One clinical training center, 25 years ago, took special interest in spotting students in the medical schools who had a potential interest in psychiatry, and who appeared to be of teaching calibre. Reasonably adequate stipends were provided during the training period, emphasis was placed on inclusion of teaching experience, paths were kept open for further extension of teaching opportunities. Due to this selection policy and program consistency, this one training center played a major part in the training of an amazing percentage of the present professors of psychiatry in the United States, and hospital or department heads of equivalent rank.

A similarly effective program is possible in psychiatric research, either for the basic sciences or clinical psychiatry, and a program of unification of the two phases of research is likewise indicated.

More and better psychiatry is now taught in our medical schools. Students are showing a consistent and healthy interest. To take advantage of this, plans should be organized now for a new type of research training program in psychiatry. Deans and professors of medical schools, and other individuals of similar interests should be informed that selected students should be spotted who show capacity for research. A planned 5-year program to follow the internship should be set up, approximately one half-time training in basic science laboratories, and the other half-time in basic hospital clinical psychiatry.

As the trainee developed, and displayed his best native capacity, the shift toward basic science research or its clinical application would naturally work itself out.

Many good things would result, among them an especially valuable one, that the Board-qualified man of the future would be equally as well trained in basic science and clinical research as in clinical practice. Undoubtedly many would remain in research or teaching, the goal hoped for in this proposal.

Some training centers or certain few trainees may by accident have followed this plan. But their scarcity is apparent.

To do this requires some change in thinking in many places. The American Board of Psychiatry and Neurology must give thoughtful consideration to allowing a generous high priority of training to such a program—lest its length be prolonged too extensively in acquiring clinical training credit. A liberal stipend provided from the first year to furnish personal and family comfort, proportionate to the economy of the period of training, not only should be high in relation to other competing programs, but also high enough to actually attract interest. Dozens of the nation's largest big name industries send personnel agents to visit senior class members of all colleges, offer them beginning salaries from \$500 to \$600 a month, and expect only a few leaders and profitable staff members to emerge from such a recruitment program. Medicine should be realistic and compete in the same manner, in its own area, which means with private practice. A beginning stipend for a trainee entering this program should be no less than \$5,000 per year, to be followed each year by a substantial increase, naturally aiming in 3 to 5 years at an income level not too far below the average net income of private practice.

This type of plan would work in medicine, surgery—any of the specialties. But it is vital to the future of research and a broader training in psychiatry.

L. H. S.

THERAPEUTIC COMMUNITY FOR DELINQUENTS?

Others studying delinquency may be interested in recommendations evolved by a Washington, D. C. project. This "Maximum Benefits Project" is one of several activities sponsored by Washington's Youth Council, a group of civic leaders appointed by the District of Columbia's Commissioners to do a city-wide coordinated study of delinquency. Supported financially by the private Meyer Foundation, the Maximum Benefits Project in 1954 began its study of efforts to prevent delinquency by operations centered in elementary public schools. Psychiatrists and social workers on this project have come to agree with those who emphasize the need for a new or at least a basically reorganized method of approaching delinquency.

Why add another proposal to the welter of already existing ones? The welter of piecemeal plans in itself gives the clue; there is a need for an organization that will provide a matrix in which some of the plans can be carried out in a more effective way. The study of delinquency (and other social ills also) needs what the free association technique has been for psychoneuroses and other psychological matters: namely, a methodological tool that will open the way to improved understanding and treatment.

In general, our proposal calls for further mobilization of the resources of both the community and the delinquents' families. Details will be elaborated in later publications, but some cardinal points are intemized below in the hope of inviting comments:

1. Comprehensive coordination of community resources under one centralized administration authorized to deal with all aspects of delinquency.

2. Identification and central registration of families that require community assistance. Registration should preferably be at a national as well as local levels.

3. Public enlightenment about the "hard core" families which produce most delinquents and about the need for a realistic long-term program to deal with these families.

4. Efforts to prevent delinquency beginning with early family life, *i.e.* even earlier than the elementary school level studied by our project.

5. In starting the preventive program early, utilization of family contacts with all other community agencies as well as the school.

6. Long term work with families, placing more emphasis on the total family and its progress through the years and not just on the individual child and the immediate problem.

7. Greater attention to the idea that a disservice is done when the community attempts to meet a family's dependency needs without expecting the family to make some progress in mobilizing its own resources.

8. Working out effective procedures for the community to make clear its expectations of families receiving community assistance and to help them meet such expectations.

9. Recognition of the social incompetence of those families who, even with the help of such a program are unable to provide themselves with adequate home life.

10. Establishment of a sub-community within the community administered by trained personnel authorized to develop a "therapeutic community" designed for the needs of such incompetent families.

Of course, a number of the above 10 points have been suggested before. The Project proposal seeks to fit them into an organized workable plan of action and, in addition, suggests a new method of dealing with those families who fail to respond to the sequence of actions outlined in points 1 to 8. This new method is the therapeutic sub-community which, for example, could be established in housing projects erected in slum clearance programs of some cities.

C. DOWNING TAIT, JR., M. D.,
15 West 84 St., NYC 24, N. Y.
EMORY F. HODGES, M. D.,
NINA B. TREVVETT, MSW.

THE AMERICAN BOARD OF PSYCHIATRY AND NEUROLOGY, INC.

The following candidates were certified by this Board after examination in New York, N. Y.,
December 16-17, 1957.

PSYCHIATRY

- Adams, William Randolph, 2040 Abington Rd., Cleveland 6, Ohio.
- Auerbach, Arthur Henry, Temple University Hosp., Philadelphia 40, Pa.
- Axel, Marian F., Station B, Poughkeepsie, N. Y.
- Bell, William Sterling, 3911 Maple, Dallas, Tex.
- Beller, Alexander, 49 E. 74th St., New York 21, N. Y.
- Bellis, John M., Jr., 39 Trumbull St., New Haven 10, Conn.
- Bernstein, Norman R., 270 Commonwealth Ave., Boston, Mass.
- Bierman, Joseph Smith, Psychiatric Institute, University of Maryland Hosp., Baltimore 1, Md.
- Bloomingdale, Lewis M., 142 Garth Rd., Scarsdale, N. Y.
- Bogoch, Samuel, 74 Fenwood Rd., Boston 15, Mass.
- Bonafede, Vincent I., Sonysa, N. Y.
- Bonan, A. Ferdinand, 133 South 36th St., Philadelphia 4, Pa.
- Bonner, Frances Jones, 127 A Bay State Rd., Boston 15, Mass.
- Boskey, Howard M., 50 Elm St., Huntington, L. I., N. Y.
- Bravole, Richard Sidney, 68 E. 86th St., New York 28, N. Y.
- Brownstein, Edward J., 3530 Henry Hudson Parkway, New York 28, N. Y.
- Byrne, William Austin, 1311 Delaware Ave., Wilmington 6, Del.
- Campbell, Robert Jean, III, 955 Park Ave., New York 28, N. Y.
- Carlson, Robert Gabriel, Kansas Treatment Center for Children, 3rd and Oakley, Topeka, Kan.
- Casriel, Daniel H., 30 E. 81st St., New York 28, N. Y.
- Ch'eng, Leslie Yu-lin, 1830 Green Acres, Topeka, Kan.
- Church, Edwin Harold, 290 Holt Dr., Pearl River, N. Y.
- Clary, William E., 1636 S. Glenstone, Springfield, Mo.
- Cline, Herbert Stanley, 416 Marlborough St., Boston 15, Mass.
- Cooper, Howard Norvin, 49 E. 74th St., New York 21, N. Y.
- Daneman, E. Adams, P. O. Box 1201, Waycross, Ga.
- Davis, Minette, 1255 North Ave., New Rochelle, N. Y.
- de Guzman, Rafael M., 660 Hoare St., Santurce, Puerto Rico.
- de Marneffe, Francis Laurent Armand, 84 Garden St., Cambridge, Mass.
- Denton, Patricia R., 5218 Wythe Ave., Richmond 26, Va.
- Denton, Theodore G., 5218 Wythe Ave., Richmond 26, Va.
- Donovan, Robert J., 330 S. Ninth St., Philadelphia 7, Pa.
- Dukav, Alexander Paul, Ypsilanti State Hosp., Ypsilanti, Mich.
- Eggertsen, Paul F., 3700 USAF Hosp., Lackland AFB, Tex.
- Eisnitz, Alan J., 1143 Fifth Ave., New York 28, N. Y.
- Escoll, Philip J., 133 S. 36th St., Philadelphia 4, Pa.
- Farkai, M. J., 603 Allenwood Ct., Dayton 10, Ohio.
- Feder, Samuel L., 12 E. 97th St., New York 29, N. Y.
- Flores-Gallardo, Arturo, P. O. Box 708, Hato Rey, Puerto Rico.
- Gagliano, Theodore E., V. A. Hosp., North Little Rock, Ark.
- Gaines, Gail Allyn, Box 75, Wingdale, N. Y.
- Gair, Donald Saul, 270 Commonwealth Ave., Boston 15, Mass.
- Gedo, John Emeric, 55 E. Washington St., Chicago 2, Ill.
- Glenn, Jules, 8 Preston Rl., Cold Neck, N. Y.
- Goll, Simon, V. A. Hosp., Chillicothe, Ohio.
- Goldfarb, William, 530 West End Ave., New York 24, N. Y.
- Gould, Robert Emery, 36 Gramercy Park, New York 3, N. Y.
- Greenbank, R. K., 40 Copley Rd., Upper Darby, Pa.
- Greenberg, Milton S., 260 S. 19th St., Philadelphia 3, Pa.
- Gross, Mortimer David, 3148 University Ave., Highland Park, Ill.
- Gussen, John, 800 NE 14th St., Oklahoma City 4, Okla.
- Guze, Samuel B., 1240 Audubon Ave., St. Louis 10, Mo.
- Harris, Boaz, Box 62, U. S. Army Hosp., Fort Benning, Ga.
- Harris, Harold J., Memorial Hosp., Chapel Hill, N. C.
- Hatheway, Jane M., RD No. 2, Westwood, N. J.
- Hauk, Herbert H., 39 A Gramercy Park, New York 10, N. Y.
- Herlihy, Charles E., U.S.M.C. Recruit Depot, Parris Island, S. C.
- Huxar, Richard Brian, Ypsilanti State Hosp., Ypsilanti, Mich.
- Hoffman, Louis, 19308 Wyoming Ave., Detroit 21, Mich.
- Holland, Bernard, 722 W. 168th St., New York 32, N. Y.
- Hunter, Doris M., 3811 O'Hara St., Pittsburgh 13, Pa.
- Hurvitz, Martin, 8 Locust La., Roslyn Heights, L. I., N. Y.
- Jacob, Walter Lindsay, 725 Jenkins Bldg., Pittsburgh 22, Pa.
- Jameson, Jean D., 118 E. 72nd St., New York 21, N. Y.
- Jenkins, Sidney Bernard, U. S. Army Dispensary, Fort Sheridan, Ill.
- Johnson, Frank Wagner, Norristown State Hosp., Norristown, Pa.
- Judas, Ilse, 55 E. Washington St., Chicago 2, Ill.
- Kaplan, Abraham I., 3 Alger Rd., Kings Point, N. Y.
- Kaplan, Harold Irwin, 110 E. 87th St., New York 28, N. Y.
- Kerr, M. Dorothea, 20 E. 68th St., New York 21, N. Y.
- Kirby, Kathryn, 7 E. 10th St., New York 3, N. Y.
- Kleiner, Henry T., Medical Towers Bldg., 255 S. 17th St., Philadelphia 3, Pa.
- Kleinschmidt, George Wilbert, Eastern State Hosp., Vinita, Okla.
- Kraft, Alan M., 1580 S. Forest St., Denver 22, Colo.
- Kremens, Jack B., Norristown State Hosp., Norristown, Pa.
- Kysar, John E., 737 N. Michigan Ave., Chicago 11, Ill.
- Landsman, Eliot, 1269 Beacon St., Brookline 46, Mass.
- Lane, Eli W., 25 E. Washington, Chicago 2, Ill.
- Lapinschou, Leonard I., 1110 Medary Ave., Philadelphia, Pa.
- Leddy, Donald Valentine, 2 Godwin Ave., Ridgewood, N. J.
- Lenz, Rosa, 8 E. 83rd St., New York 15, N. Y.
- Libbon, Joseph Anthony, V. A. Hosp., 150 S. Huntington Ave., Boston, Mass.
- Longley, George H., 203 W. Lanvale St., Baltimore 17, Md.
- Mallott, Ira Floyd, 3811 O'Hara St., Pittsburgh 13, Pa.
- Marcus, Harold, 9 E. 96th St., New York 28, N. Y.
- Margrett, John Grant, 3440th U. S. Army Hosp., Fort Benning, Ga.
- Masterson, James F., Jr., 60 Sutton Pl., S., New York 22, N. Y.
- McIndoo, Mary V., 1408 N. Fillmore St., Arlington, Va.
- Michell-Bateman, Mildred R., Lakin State Hosp., Lakin, W. Va.
- Murray, William Ellsworth, Cragmont, North Madison, Ind.
- Oestreicher, Harry, 44 Olyphant Dr., Norristown, N. J.
- Oshaker, Bennett, 4435 35th St., N. W., Washington 8, D. C.
- Palm, Charles H., 1507 W. Girard Ave., Philadelphia 30, Pa.
- Paul, Norman L., Jackson Putnam Children's Center, 244 Townsend St., Boston, Mass.
- Pavorsky, Bernard, Willard State Hosp., Willard, N. Y.
- Petrus, Joseph Peter, 441 Third Ave., North Pelham, N. Y.
- Phillips, Thomas W., Jr., 1234 Thomas Rd., Wayne, Pa.
- Pinney, Edward Lowell, Jr., One Hanson Pl., Brooklyn 17, N. Y.
- Prescod, Horace J., 422 Vernon Rd., Philadelphia 19, Pa.
- Raskin, Raymond A., 36 E. 73rd St., New York 21, N. Y.
- Reye, George H., Pontiac State Hosp., Pontiac, Mich.
- Robertson, Robert Hood, St. Elizabeths Hosp., Washington D. C.
- Rosberger, Henry, 10 E. 76th St., New York 21, N. Y.
- Rudorfer, Leon, V. A. Hospital, Brooklyn 9, N. Y.
- Saft, James H., 73 E. Elm, Chicago 11, Ill.
- Sarwer-Foner, Gerald J., 4631 Sherbrooke St., W., Montreal, Quebec, Can.
- Sawyer, Tom M., 600 Central Ave., Wilmette, Ill.
- Schwartz, Melvin L., 55 E. Washington St., Chicago 2, Ill.
- Shea, Thomas P., Foxboro State Hosp., Foxboro, Mass.
- Sherman, Marvin, Metropolitan Hosp. Clinics, 1800 Tuxedo Ave., Detroit 6, Mich.
- Shorr, Jay, 55 E. 67th St., New York 21, N. Y.
- Silberman, David E., 7 Park Ave., New York 16, N. Y.
- Sires, William O., 1026 Park Ave., Bridgeport, Conn.
- Slutzky, Gilbert, 10720 W. Seven Mile Rd., Detroit 21, Mich.
- Smith, Dermott Andrew Paul, Tripler Army Hosp., Honolulu, T. H.
- Soluhay, John S., 201 N. Craig, Pittsburgh 13, Pa.
- Solomon, Rebecca Zinsher, 435 Farmington Ave., Hartford 5, Conn.
- Spitzer, Frank P., 111 N. 40th St., Philadelphia 39, Pa.
- Stamm, Julian L., 65 E. 74th St., New York 21, N. Y.
- Steenbach, Meyer, 236 Rockledge Rd., Penn Wynne, Philadelphia 31, Pa.
- Susman, Harold Perran, 90 8th Ave., Brooklyn 15, N. Y.
- Suter, James T., 1148 4th Ave., New York 28, N. Y.
- Tamsik, Theodore N., Unioncliff, Meriden, Conn.
- Turner, John Ellis, 208 Roberts Ave., Glenade, Pa.
- Waisel, I. David, Cleveland Regional Treatment Center, E. 124th St. and Fairhill Rd., Cleveland 20, Ohio.
- Walkenstein, Eileen, 350 Central Park W., New York 25, N. Y.

Watsky, S. Robert, Station B, Poughkeepsie, N. Y.
 Wiggers, Aimee Louise, 300 Central Park, W., New York 24, N. Y.
 Wolff, Kurt J., Osawatonic State Hosp., Osawatonic, Kan.
 Yudashkin, E. Gordon, 2390 Central Ave., Baldwin, N. Y.
 Zahm, Robert H., 355 Roycroft Blvd., Snyder 21, N. Y.
 Zarsky, Edward L., 422 Beacon St., Boston 15, Mass.

NEUROLOGY

Anderson, Kittridge, 3810th USAF Hosp., Maxwell AFB, Montgomery, Ala.
 Ball, Stanley Martin, Albany Hosp., Albany 8, N. Y.
 * Biser, David L., 350 Central Park, W., New York 25, N. Y.
 Crawley, James William, 1200 M.D. Anderson Blvd., Houston, Tex.
 Dekaban, Anatole S., 4613 Chestnut St., Bethesda 14, Md.

* Denotes Supplementary Certification.

Ferriss, Gregory Stark, 1542 Tulane Ave., New Orleans 12, La.
 * Glusman, Murray, 50 E. 72nd St., New York 21, N. Y.
 Jimenez-Pabon, Edward, 1057 Munoz Rivera St., Rio Piedras, Puerto Rico.
 Leftman, Henry, 2021 81st Ave., S. E., Mercer Island, Wash.
 Lubic, Lowell Gerald, Montefiore Hosp., Pittsburgh 13, Pa.
 Mendelson, David Frey, 3248 Edmund Blvd., Minneapolis 1, Minn.
 * Philpot, De Saussure Ford, Jr., 277 3rd Ave., New York 10, N. Y.
 Poser, Charles M., Univ. of Kansas Med. Center, Kansas City 12, Kan.
 Rodin, Ernst A., Neuropsychiatric Inst., University Hosp., Ann Arbor, Mich.
 Stark, Lawrence, 333 Cedar St., New Haven 11, Conn.
 Stein, Joseph M., 3617 W. 6th Ave., Topeka, Kan.
 Strom, John O., Rhode Island Hosp., Providence, R. I.
 Tyler, H. Richard, Peter Bent Brigham Hosp., 721 Huntington Ave., Boston 15, Mass.
 Whisnant, Jack Page, Mayo Clinic, Rochester, Minn.

OPINION

The greatest number of minds seem utterly incapable of fixing on any conclusion, except from the pressure of custom and authority: opposed to these there is another class less numerous but pretty formidable, who in all their opinions are equally under the influence of novelty and restless variety. The prejudices of the one are counterbalanced by the paradoxes of the other; and folly, "putting in one scale the weight of ignorance, in the other that of pride," might be said to "smile delighted with the eternal poise."

—WILLIAM HAZLITT

HANDLING THE MACHINE

A great problem that man has never faced squarely hangs like the sword of Damocles over his head. The question is, does man to-day possess sufficient soundness of mind to exercise intelligent control over the complicated civilization he has created? Upon this intelligent control depends the happiness of the individual, the first settlement of the problems of labor and capital, the peace of the world, the fate of democracy, and the destiny of the race. . . .

The majority of people do not even know that the final test of the sound mind implies sane conduct, not merely intelligent thinking.

—STEWART PATON
 (Signs of Sanity, 1922)

NEWS AND NOTES

GRACIE SQUARE HOSPITAL.—A 232-bed, fully air-conditioned psychiatric hospital is now under construction at 420 East 76th Street, New York City, with completion scheduled for October 1, 1958. It is designed as an "open ward" hospital for intensive treatment of adults suffering from all types of acute psychiatric disorders, including those with complicating medical or surgical problems.

Plans are being made for residency training, nurses' training, and research programs. Leonard Cammer, M. D., will be director, and Lothar Kalinowsky, M. D. will be chief consultant. Address inquiries to Dr. Leonard Cammer, 132 East 72nd Street, New York, N. Y.

THE ADOLF MEYER AWARDS.—The Adolf Meyer Awards Committee of the Association for Improvement of Mental Health, Inc., is inviting nominations for the 1958 awards, which will be announced during Mental Health Week, in May. These awards are given annually to individuals and/or organizations who have made meritorious contributions to the professional care and treatment of the mentally ill, both in and outside of hospitals.

Nominations for this award should be sent to Dr. Milton M. Berger, Chairman, Advisory Committee, A.I.M.H., 50 East 72nd St., New York 21, N. Y., before April 1, 1958.

AMERICAN SOCIETY OF CLINICAL HYPNOSIS.—Milton H. Erickson, M. D., Phoenix, Ariz., has been elected president of the recently organized American Society of Clinical Hypnosis. Dr. Erickson has also been appointed editor of the *American Journal of Clinical Hypnosis*, to be published by the Society. Dr. Erickson was also recently elected to the executive council of the Academy of Psychosomatic Medicine.

DR. ROBERTS HEADS VERDUN PROTESTANT MENTAL HOSPITAL, P. Q.—Dr. Charles A. Roberts, principal medical officer in the Mental Health Division of the Department of National Health and Welfare, Ottawa, Canada, has resigned. He has been appointed medical superintendent, Verdun Protestant Mental Hospital, Verdun, Que., and assumed his new duties on December 15, 1957. Dr. Roberts joined the Mental Health Division in the federal government department in August, 1951, became chief shortly afterwards, and subsequently was promoted to principal medical officer. During his tenure of office there, he was concerned with the administration of the federal Mental Health Grant of about \$7,000,000 and his efforts and advice were widely appreciated by the Directors of Mental Health of the provinces and by others in the universities and voluntary societies with whom his work brought him into contact. He was also active in the field of health insurance studies, which after two decades of governmental planning are now about to bear fruit. Among his new duties will be the direction of a large mental hospital with a very active research programme and teaching at McGill University's Department of Psychiatry.

AMERICAN BOARD OF PSYCHIATRY AND NEUROLOGY, INC.—Two examinations will be given in 1958. The first will be held in San Francisco, Cal. on March 17 and 18, 1958, and the second on December 15 and 16, 1958, in New York, N. Y.

The Board also announces termination of training credit for military service in the Korean emergency. Training credit for full-time psychiatric and/or neurologic assignment in unapproved military programs or services between the dates of January 1, 1950, and January 1, 1954, will be terminated on January 1, 1959.

THE COLLEGIUM INTERNATIONALE NEURO-PSYCHOPHARMACOLOGICUM.—The C.I.N.P. will meet in Rome from September 9-12, 1958, under the direction of Prof. Ernst Rothlin. The Congress President will be Prof. Emilio Trabucchi.

The program will include symposia on the following subjects: Methods and Analysis of Drug-Induced Abnormal Mental States in Man; Comparison of Abnormal Behavioral States Induced by Psychotropic Drugs in Animals and Man; Comparison of Drug-Induced with Endogenous Psychoses in Man. Plenary sessions will be devoted to: The Impact of Psychotropic Drugs on the Structure, Function and Future of Psychiatric Services; (a) in the hospitals, and (b) in extramural clinics and private practice. The fourth day will be given over to the presentation of original papers.

For further information, write to Herman C. B. Denber, M. D., secretary, Manhattan State Hospital, Ward's Island, New York 35, N. Y.

DEATH OF DR. GEORGE PRATT.—Dr. George Kenneth Pratt, psychiatrist on the neuropsychiatric staff of Bridgeport Hospital, Conn., died Dec. 12, 1957, at the age of 66.

Born in Detroit, Dr. Pratt received his medical degree from the Detroit College of Medicine and Surgery and did graduate study at the State Psychiatric Hospital, University of Michigan. Among the numerous positions which Dr. Pratt held were those of medical director, Mental Hygiene Commission, New York State Charities Aid Association; assistant clinical professor of psychiatry and mental hygiene at the School of Medicine, Yale University; psychiatric director for the Stamford Child Guidance Service and the Bridgeport Mental Hygiene Clinic.

Dr. Pratt was a diplomate of the American Board of Psychiatry and Neurology, and a member of The American Psychiatric Association. He was the author of several books including *Your Mind and You*, *Why Men Fail*, and *Soldier to Civilian*.

THE NATIONAL ASSOCIATION OF RECREATIONAL THERAPISTS.—The 6th annual Con-

ference and Institute of the Association will be held March 16-20, 1958, in Topeka, Kan.

This promises to be an outstanding opportunity for "Recreators" to get together in an atmosphere of constructive thinking and gratifying achievement. Several leaders in the Midwest and other areas have consented to take part in the general program and Institute. Make plans now to attend this Conference that will involve all areas of Recreation.

For further information write to Ira J. Hutchinson, General Conference Chairman, Topeka State Hospital, Topeka, Kan.

PROTECTION AGAINST POLIO.—Four outstanding events are listed in a review of polio in 1957 by Basil O'Connor, president of the National Foundation for Infantile Paralysis. They are: 1. The massive vaccination promotion of the spring and summer of 1957; 2. The consequent drop of paralytic polio; 3. The expanding research projects of the March of Dimes organization; 4. The undertaking by the National Foundation of a program, called "Operational Comeback," to bring benefits of modern rehabilitative techniques to many thousands of polio patients who were stricken by the disease in years past and still need help.

Only 3 out of 5 Americans in the susceptible age group under 40 have had one or more injections of Salk vaccine, according to revised Public Health Service estimates as of Dec. 1, 1957. This leaves 2 out of 5 who are just as vulnerable today to polio paralysis as if there had never been Salk vaccine. Unless most of the 45,000,000 of unvaccinated citizens under 40 get their Salk shots before the next polio season, there is no assurance that we may not again have epidemics and tragic crippling in 1958.

BASIC PSYCHIATRIC NURSING CONFERENCES.—The National League for Nursing, Inc. announces that conferences for faculty and administrators of basic baccalaureate degree programs in nursing will be held in 5 cities to study the relationship of psychiatric nursing content to other areas of the nursing curriculum.

Sponsored by the NLN Mental Health and Psychiatric Nursing Advisory Service, under a grant from the National Institute of Mental Health, these conferences will be held as follows: March 18-20, Atlantic City; April 14-16, Boston; April 18-20, Cleveland; May 7-9, San Francisco; April 24-26, Washington, D. C.

For further information address The National League for Nursing, Inc., 2 Park Avenue, New York 16, N. Y.

Grants totalling more than \$400,000 have been received by the National League for Nursing, New York, for the support of programs designed to increase the number of students in both basic and graduate nursing education, and to improve nursing care of the mentally ill. Currently more than 100,000 aides are giving much of the direct nursing care to the 700,000 patients in mental hospitals, the NLN reports.

ARCHIVES OF CRIMINAL PSYCHODYNAMICS FREUD ISSUE.—Volume 2, No 2 (Spring 1957) of this Journal, just received, is a special issue commemorating the Freud centenary. In addition to the usual space for regular articles there are 100 pages devoted to commemorative articles, and 12 further pages containing abstracts of contributions related to the Freud centenary mainly in Spanish publications. There is also a group photograph of Freud with his wife and daughter on their arrival in London.

RECREATION FOR THE ELDERLY.—The Adult Recreation Council of the New York State Department of Education has issued a pamphlet entitled *Recreation for the Elderly* for the use of those interested in the leisure-time problems of the aged. The pamphlet gives suggestions to leaders in this field on steps to take in expanding existing programs and setting up municipal programs of recreation within the terms of legislation passed in 1956, which authorizes state aid to cities in furnishing recreational programs for senior citizens.

Copies of the pamphlet are available from the Adult Recreation Council, 23 South Pearl Street, Albany, N. Y.

HUMAN ADAPTATION TO DISASTER.—The 1957 Summer issue (Vol. 16, No. 2) of *Human Organization*, a quarterly journal published by The Society for Applied Anthropology, is a special issue devoted to human adaptation to disaster. The topics covered include The English Flood of 1953; Disasters Compared in Six American Communities; Typhoons on Yap; Some Functions of Communication in Crisis Behavior; Problems of Perception in Extreme Situations; together with an annotated bibliography on disaster research.

TRAINING IN GROUP RELATIONS.—The National Training Laboratories of the Division of Adult Education Service of the National Education Association, Washington, D. C., will conduct its 12th annual Summer National Training Laboratory in Group Development at Gould Academy in Bethel, Maine. The sessions will consist of two 3-week periods, June 15-July 4, and July 13-August 1, 1958, with 150 persons admitted to each session.

The purposes of this training program are to develop more effective human relations, knowledge, insights and research in professional and volunteer leaders; to study problems of intergroup relations and organizational conflict, and to plan for effective work in the community.

For further information write to: Mrs. Aileen Waldie, NTL, 1201 16th St. N.W., Washington 6, D. C.

WORLD MEDICAL PERIODICALS.—The 2nd edition of *World Medical Periodicals*, published by The World Medical Association, October 1, 1957, is available at 30 shillings (Br) or \$6.00 (USA) per copy. This book of 340 pages contains a list of nearly 5,000 titles of medical periodicals with 4 special appendixes. The text is in English, French, German and Spanish.

Orders should be addressed to: The Editor, *British Medical Journal*, Tavistock Square, London W.C. 1, England.

RE: MALTHUS.—Approximately 4,318,000 babies were born in the United States during 1957. This would be about 98,000

ahead of last year's record, and probably set a new record for the 7th straight year, as reported by the U.S. Public Health Service.

Recent yearly increases in births are the result not only of an increase in the number of marriages but of a trend toward larger families, the Service said.

DR. MARGARET SMYTH DIES.—On December 30, 1957, occurred the death of Dr. Margaret Hamilton Smyth in Palo Alto, Cal., age 84.

At the Golden Gate International Exposition of 1940 in San Francisco, Dr. Smyth was voted California's most distinguished woman in medicine. She obtained her medical degree from Cooper Medical College, which later became the medical school of Stanford University. She served as director of Stockton State Hospital and was a past-president of the San Joaquin County Medical Society, which gave her a special award for her outstanding service. She also received an honorary Doctor of Science degree from the College of the Pacific.

It will be remembered that Dr. Smyth contributed a comprehensive review of psychiatric facilities in California in connection with the first meeting of The American Psychiatric Association on the Pacific coast in 1938. This report appeared in the March 1938 issue of the JOURNAL.

INDIANA MENTAL HEALTH SERVICES.—Dr. John W. Southworth, superintendent, Logansport State Hospital, has been appointed deputy commissioner, Indiana Division of Mental Health, effective January 1, 1958.

Dr. Ernest J. Fogel, chief of neurology and psychiatry at the VA Hospital, Indianapolis, Ind., and associate professor of psychiatry at Indiana University will become the 11th superintendent at Logansport on March 1, 1958. During the interim January 1 to March 1, 1958, Dr. Frank D. Hogle, assistant superintendent, will serve as acting superintendent at Logansport State Hospital.

NATIONAL ASSOCIATION FOR RETARDED CHILDREN, INC.—The 9th annual conven-

tion of the National Association for Retarded Children will be held in Philadelphia, October 8 to 11, 1958.

The meeting will consist of exhibits, general sessions and workshops on all phases of mental retardation.

For additional information write: NARC Convention, 99 University Place, New York 3, N. Y.

AMERICAN ORTHOPSYCHIATRIC ASSOCIATION.—The 36th annual meeting of the American Orthopsychiatric Association will take place in New York City, March 6-9, 1958. The association is a national professional organization in the field of the behavioral sciences, bringing together the key disciplines involved in the team approach to prevention and treatment of behavior problems and related training and research.

Some 60 scientific papers will be delivered at the meeting. Workshop sessions will include such topics as: methodologies for studying healthy behavior; learning disturbances and retardation; use of newer drugs in child psychiatry; factors associated with mental disorders among the aged; and relationship between the problem family and juvenile delinquency.

For further information write: Dr. Marion F. Langer, executive secretary, American Orthopsychiatric Association, 1790 Broadway, New York 19, N. Y.

DEATH OF DR. YOUNG.—Dr. G. Alexander Young, former head of the department of neuro-psychiatry at Creighton University and the University of Nebraska, died Nov. 4, 1957, at the age of 81.

Dr. Young, a graduate of the Chicago Homeopathic College, became superintendent of Norfolk State Hospital in 1908. In 1909 he resumed studies in London and Zurich, becoming a student of Dr. Carl Jung. The following year he entered private practice in Omaha.

For many years he headed the staff of County Hospital, was head of the Douglas County Board of Mental Health, and consultant in psychiatry for the Union Pacific Railroad.

Dr. Young is credited with introducing the use of insulin to the Midwest in the treatment of mental illness.

BOOK REVIEWS

THE FACTS OF MENTAL HEALTH AND ILLNESS. By *K. R. Stalkworthy.* (Christchurch, New Zealand: N. M. Peryer Ltd., 1956, pp. 215. 18/6.)

This book is written for the layman interested in furthering his knowledge about mental health and illness. In substance, it stems from a series of some 20 lectures delivered before lay audiences of the Regional Council of Adult Education in Auckland. Suggestions for their publication came from those having attended these lectures. The book contains no new or startling ideas about mental health and illness. It contains only that which is generally acceptable in professional circles.

The author, Senior Medical Officer of the Auckland Mental Hospital, presents his material lucidly with few technical terms, and when the latter are used, they are clearly defined. He implies that an individual has positive mental health when he gets from and gives to life all that is to be given, in accordance with his individual talents, capacities and circumstances; when he has the knack for accepting the unalterable as that which cannot be altered, and, succeeds in altering those things that can and should be altered in oneself or in things about them. He implies also that positive mental health is the ability to live happily and easily with others, meliorated by understanding and sympathy and unembittered by things deserving no bitterness; and with this a willingness to give help when possible, and to seek help when needed. Thus the spectrum of many traditional virtues are an essential part of positive mental health, and their lack is evidence of unhealthfulness that often lies at the root of troubles which plague the mentally ill.

A brief summary is appended to the last chapter and with it a brief admonition: "Psychology and psychiatry are of such real and potential importance to every individual that the intelligent layman should take the trouble to find out a little about them, but he will do well to try to distinguish between facts established by observation and experience, and the theories which, however interesting and ingenious, are best taken with a grain of salt until proved beyond argument."

The book admirably fulfills its aims and purposes, namely as a reference for intelligent laymen who desire more knowledge about mental health and illness

W. L. T.

THE EARLY DETECTION AND PREVENTION OF DISEASE. Edited by *John P. Hubbard, M.D.* (New York: Blakiston Division, McGraw-Hill Book Co., 1957. \$7.50.)

Although the title of this book does not show that it is of special interest to psychiatrists, a review of the table of contents would definitely indicate that there is much that would be worthy of

their attention. In Part 2: Preventive Medicine and the Cardiovascular System, there is an article by Dr. Leon J. Saul, titled, "Psychogenic Factors Related to Hypertension," and another by Dr. Harry F. Zinsser, Jr., titled, "Prevention of Cardiac Neuroses." Part 5 is devoted to: The Norms of Mental Health and Early Detection of Deviations from the Norms, in which Dr. Milton J. F. Senn discusses "The Child," Dr. Benjamin H. Balser, "The Adolescent," Dr. Kenneth E. Appel, "The Adult Male," and Dr. O. Spurgeon English, "The Adult Female." In the last section there is a discussion of the "Practical Application of Preventive Medicine in the Armed Services."

Dr. Senn, in opening his discussion, states: "The norms of behavior and mental health are not an easy topic to discuss. The subject is abstract and less tangible than a discussion of diseases or symptoms. Although disease may often be difficult to diagnose, nevertheless it is easier to determine what is wrong physically than psychologically or socially." This book has made a very encouraging start towards this end. It contains both chapter bibliographies and an index.

JAMES L. MCCARTNEY, M.D.,
Garden City, N. Y.

THE MENTALLY RETARDED PATIENT. By *Harold Michal-Smith.* (Philadelphia: J. B. Lippincott Co., 1956. \$4.00.)

This book is another of several published recently in response to an awakened interest in the problems of the mentally retarded and their parents. In the foreword the author states that the book was written by a psychologist who had been working with physicians in a clinic for the mentally retarded and that it was intended particularly for physicians.

Such a publication is timely and very much needed. The medical profession as a class has been guilty of not taking sufficient interest in the mentally retarded child. Its members generally have had little understanding of and sympathy for the parents and their emotional problems engendered by the retarded offspring.

The realization and acceptance that their child is definitely retarded is extremely difficult for many parents. Often this tragic situation produces an emotional state bordering on panic in which guilt, inferiority, punishment and frustration are very serious emotional factors. These parents are in dire need of a sympathetic understanding of their situation and of professional advice concerning both the best procedures in the training of the child and a solution of their own emotional difficulties. There should never be the rebuff which so many parents have experienced with the blunt and cruel advice that as the condition is incurable and hopeless the child should be placed immediately in an institution. Some have gone still further and advised the parents

to forget the child as soon as placement was made.

All too frequently both psychiatrists and pediatricians have been definitely unwilling to spend any time treating an obviously retarded child except possibly when called as physicians to treat an acute medical condition.

As mental retardation is, as far as we know, an abnormality of biologic mental development or due to a pathologic mental condition it is definitely a psychiatric problem. It is extremely regrettable that psychiatrists have taken so little interest in these children. Pediatricians are showing much more interest and are helping both the children and the parents. The latter perhaps in many instances would be better understood and helped by a psychiatrist.

The presence of the word "patient" in the title denotes that the substance of the book is directed toward methods of treatment particularly by physicians. It is equally instructive to members of the other professions who are in any way assisting with the education, training and placement in employment of mentally retarded persons.

The various chapters of the book are well organized and the author presents in a very understandable manner details of procedures necessary in assisting the retarded individual. The first chapter—"The Role of the Physician"—describes situations when a physician is called upon for advice in the management and training of the retarded. The author gives excellent advice in detail which should be very helpful to any counselors as well as physicians.

The second chapter is mainly concerned with the emotional problems found in children with brain impairment. A good psychological presentation is made. Chapter five is entirely psychological and describes measuring techniques and their interpretation.

In Chapter 3 Dr. Lawrence Slobody presents a classification of mental retardation. Several such have been formulated and this arrangement seems to be adequate and entirely workable.

In the chapter on "The Psychological Situation," the author rather belittles the occurrences of the familial type of mental retardation. It is very true that fewer cases of retardation are now diagnosed as purely familial, but the condition does exist and is probably encountered more often in institutions than in clinics.

In the chapter "Attitudes Toward Prevention and Etiology," the author states, "We do not know who should and who should not have children." On the whole this is very true. There are, however, a few types of retardation which can be positively diagnosed as genetic in origin. Rarely a dominant gene but fairly frequently the presence of recessive genes in the parents is the etiological factor. Physicians who did not diagnose this type of retardation and consequently did not know the implications have told parents that the child's condition was simply an accident of development and to have more children. The tragedy of having another or several retarded children which could have been prevented by proper advice should be impressed on physicians.

In the earlier chapters in describing patients much mention is made of the I.Q. and very little of the M.A. The use of I.Q. is perfectly proper, but in a book to be read by those not using I.Q.'s daily the use of M.A. is often much more realistic and informative. This is very evident in the chapter "Vocational Prognosis" where predictions are most practical and based on the M.A. degree of mental development.

The chapter on education goes into excellent detail and will be very helpful not only to teachers and other professional workers but to parents. This is also true of the chapter on "Vocational Prognosis."

In the last chapter, "Looking Forward," the statement is made that in institutions there are no funds for research. That funds are decidedly inadequate is true but in several states research is supported by specific appropriations. Research has been conducted for many years with very little or no support. In the future, research projects will undoubtedly increase in number and importance, both in institutions and in the communities.

Following the last chapter is a very good bibliography for professional workers and also as an appendix a very complete list of state and private institutions in the United States caring for the mentally retarded child.

On the whole this book is a valuable addition to the literature concerning the education, training and placement in employment of the mentally retarded. It should be read by all who are in any way interested in their welfare. Not only will physicians find it instructive, but parents, teachers, psychologists, social workers and counselors will gain knowledge which will help them in their attempts at solving the many and varied problems presented by those of retarded mental development.

HARRY C. STORRS, M.D.,
Hanover, N. H.

RÖNTGENDIAGNOSTISCHE PROBLEME BEI INTRA-KRANI-
ELLEN GESCHWÜLSTEN und ELEKTROENCEPHALO-
GRAPHIE UND CORTICOGRAPHIE BEI CEREBRALEN
KRAMPFLEIDEN. ACTA NEUROCHIRURGICA SUP-
PLEMENTUM III. (Vienna: Springer, 1955.)

This III. Supplementum of Acta Neurochirurgica contains the papers (partly in the original and partly in abstract form) delivered at two conventions which took place in September 1954 in Bad Ischl, Austria. The Seventh Annual Convention of the German Neuro-surgical Society had as its main topics cranioplasty, radiography of the skull and arteriography particularly with regard to brain tumour diagnosis. These problems are discussed extensively by leading European workers in the respective fields. In addition, several papers dealt with related problems of a more general neuropsychiatric interest. M. Milletti (Bologna, Italy) discusses the thrombosis of the carotid artery, a topic which is finding increasing interest in many neurological centers. On the basis of 450 cases described in the literature and 21 of his own he stresses the relative frequency of this condition and states that the diagnosis can be made on clinical grounds (before arteriography) by palpation of the internal

carotis in the pharynx and by measuring the systolic retinal pressure which is found lower on the side of the thrombosed vessel. Of general interest is also the paper by Nylin and Blömer who measured cerebral blood flow by means of radio active isotopes and state that they are now able to measure not only the blood flow through the brain as a whole but also that of each hemisphere separately.

The main topic of the I. Convention of the Austrian Electroencephalographic Society was electroencephalography and corticography in cerebral convulsive diseases. Prof. Hoff, head of the Department of Neurology and Psychiatry of the University of Vienna delivered an interesting lecture on temporal lobe epilepsy. Its clinical manifestations comprise psychic and somatic reactions and generally represent a tendency towards homeostasis of the cerebral dysrhythmias as well as of the psychic disorder. Fishgold (Paris) in his article on electrocorticography gives a concise historical survey of the changing viewpoints of neurosurgeons, from Foerster to Penfield, towards focal epilepsy and their criteria for removal of a lesion. Monnier (Geneva) reports on the results which he, in collaboration with different neurosurgeons, achieved in conditions of intractable trigeminal neuralgia by stereotactic coagulation of the nucleus ventralis posterior of the thalamus. The psychiatric sequelae are similar to those of frontal lobotomies, as the patients are indifferent to their pain, sometimes a little euphoric, frequently hyperemotional. Their personality is less colorful, less lively, particularly after bilateral coagulation. The latter may lead to late vegetative signs, among others to impotence in men, to severe trophic changes in the extremities and to paralytic neurokeratitis.

V. A. KRAL, M. D.

McGill University,
Montreal, Quebec.

NEUROLOGY AND PSYCHIATRY IN CHILDHOOD. Research Publications of the Association for Research in Nervous and Mental Disease, Vol. XXXIV, Edited by *Rustin McIntosh, M. D.*, and *Clarence C. Hare, M. D.* (Baltimore: Williams & Wilkins Company, 1954.)

The subject of the XXXIVth research publication of the Association for Research in Nervous and Mental Disease is "Neurology and Psychiatry in Childhood." It is highly interesting and informing for the neurologist and the child psychiatrist, because it covers in a large range results for new research, change of points of view and clarifications in both fields. The first part of the book, whose topic is "Infections of the Central Nervous System" gives among others a report by J. E. Salk about the problems for vaccination against poliomyelitis which may answer several questions. The second part brings a great deal of material in regard to the "Developmental and Traumatic Aspects," including a paper by J. Ransohoff and S. Carter, "Hemispherectomy in the Treatment of Convulsive Seizures Associated with Infantile Hemiplegia," where the authors recommend the

surgery in a few carefully selected cases. They did not find any remarkable lowering of their 3 patients' I.Q., but did find improvement in their behavior. Abner Wolf and D. Cowen publish in the third part, "Functional and Degenerative Disturbances," 13 cases of chronic degenerative brain disease and demonstrate that in all these cases, divided in 4 groups, anoxia seems to stand out as the pathogenic factor. A thorough list of references makes it possible to follow the research done in this field. "Roentgenographic Aspects" are taken up in the fourth part.

The child psychiatrist will especially enjoy the fifth part, "Psychiatric Aspects." Here, R. Rabinovitch and his staff make an excellent attempt to classify the cases of reading difficulties. The confusion in this field and the lack of differentiation has certainly troubled many child guidance clinics. Rabinovitch suggests in the paper, "A Research Approach to Reading Retardation," a much clearer differentiation between primary and secondary retardation, dependent on the degree of involvement of organic factors.

In several papers in the fifth and sixth part of the publication we find a definite tendency to a multi-dimensional approach to psychiatric problems, concerning diagnosis, etiology and treatment. A. Blau stresses the necessity of careful investigation in "The Psychiatric Approach to Post-traumatic and Post-encephalitic Syndromes," where he demonstrates with case material how easily the diagnosis of organic damage can be placed with neglect of the environmental and emotional constituents and, therefore, influence the therapeutic approach unfavorably. J. C. Hirschberg and K. N. Bryant give a survey about "Problems in the Differential Diagnosis of Childhood Schizophrenia" in regard to classification, diagnosis, etiology, treatment, and come to the conclusion that "usually there is a complex interaction" of constitutional and psychological factors, no "either or."

It is impossible to do justice to a book with so many interesting and important papers in a brief review. The reviewer had, therefore, to limit herself to a short report of some of them, but it cannot be stressed enough how much stimulation it provides for the readers of both fields.

L. BERNSTEIN M. D.,
Louisville, Kty.

LIVER, BILIARY TRACT AND PANCREAS. By *Frank H. Netter, M. D.* CIBA Collection of Medical Illustrations, commissioned and published by CIBA. (Boston: Little, Brown & Co., 1957. \$10.50.)

The third volume in the estimated nine-volume, twenty-year project to create for medicine the first definitive collection of authentic, full-color illustrations of every significant segment of the human body and diseases that affect it, has been published.

The artist of the entire series is the country's leading medical illustrator, Dr. Frank H. Netter of Norwich, Long Island. The undertaking is so vast that Dr. Netter will be devoting virtually the

best of his productive years to completing the series.

Two volumes have already been issued: *Nervous System and Reproduction System*. Part III incorporates a new feature designed to enhance the book's value as a versatile, multi-purpose aid to clinicians, teachers, researchers and students. This feature consists of literature references for the convenience of those wishing to follow up any topics discussed in the text. The 165 pages include 133 full-color plates by Dr. Netter.

Contributors and consultants to Part III were: Drs. Oscar Bodansky, chief of the department of biochemistry at Memorial Hospital; Eugene Clifton, associate professor clinical surgery, Cornell University Medical College; Donald D. Kozoll, associate attending surgeon, Cook County Hospital; Hans Popper, director, department of pathology, Mt. Sinai Hospital, and Victor M. Shorov, assistant clinical professor of medicine, University of California Medical School.

The books in this series should prove invaluable to the anatomist and pathologist and to the physician and surgeon. They are also valuable as works of reference in medical libraries. All volumes in The CIBA Collection are sold at cost as a service to the medical profession and medical students.

C. B. F.

PERSONALITY IN YOUNG CHILDREN. Vol. I: Methods for the Study of Personality in Young Children. Vol. II: Colin—A Normal Child. By *Lois Barclay Murphy, Ph.D.* (New York: Basic Books, Inc., 1956. \$10.00 the set.)

These volumes are the product of Dr. Murphy, and her 11 collaborators, during her 15 years of research on the development of normal children at the Sarah Lawrence Nursery School. The author had been impressed as early as 1930, that there was a tremendous hiatus in the data available regarding emotional development of normal children. Such data would be needed to develop a depth psychology which could render meaningful temperamental differences, the dynamic flux of everyday life, and make possible a closer empathy with the individual child. Young children are notoriously difficult to study by the conventional verbal methods used with adults which meant that new techniques had to be developed that would give us clues to the inner emotional life of the child.

Volume I is devoted to a description of the methods that Dr. Murphy and her associates have developed. Part I, "Experiments in Free Methods," describes the various means that give the child the maximum opportunity for free play. The major portion is given to a discussion of miniature life toys, of which varying combinations are ubiquitous in the play rooms of child psychiatrists. Materials, methods, illustrations of behavior by various children, recording and analysis of results are given for this approach and the others throughout the book. The author does not advocate precipitating these methods into a rigid form, but presents her work in detail, to show what can be done and to encourage modifications. A number of photographs illustrate some of the patterns seen with the use of the toys. Sensory toys are selected to see how the

child responds to tactile, auditory, visual and olfactory stimuli. Dough and cold cream methods were devised to play a similar but simpler role for the two-to-three-year-old that paints and fingerpaints do for older children. Trude Schmidt-Wachner contributes a chapter on painting and Anna Harotch does one on the Rorschach examination. Part 2, "Experiments in Group Play and in Readiness for Destruction," is by L. Joseph Stone. Group games are both structured so that a child can spontaneously assume leadership, or is assigned that role for a time. Aggressive and destructive impulses are studied through the use of balloons. Part 3, "Experiments in Active Play Techniques," is by Eugene Lerner. These researches focus on the study of ego development by use of standardized play techniques. Blocking techniques were used to study the child's handling of frustration. Part 4, "Observing Children in Nursery School Situations," is by Evelyn Beyer.

This volume closes with appendices largely presenting methods of analysis of the various techniques, and an adequate index. These studies are based on work previously reported in *Methods for the Study of Personality in Young Children*. Vol. 6 No. 4 of the Monographs published by the Society for Research in Child Development. Dr. Murphy has reworked and extended much of her work, but large parts of the remainder of the book are identical with 1941 reports.

Volume II presents Colin, a normal child, during his 3 years at the Nursery School. Observations are reported in great detail but are edited to avoid repetitiousness and detailed analysis. From the pages emerges a little boy who, through being presented in a variety of circumstances, gives us an opportunity to see how he fluctuates and is consistent, how he attempts to solve problems and frustrations, but especially his vibrant participation in life. The book is divided into three equal sections. The first presents Colin, as seen by his nursery school teacher, while the second illustrates how he responded to the various projective tests described in the first volume. Part 3 summarizes and interprets the previous material. One is impressed by how complex the developing personality can be, but nevertheless, themes can be seen which help facilitate interpretation. Dr. Murphy is right in stating that within these records lie observations that cannot be completely explained by any one school of psychology, psychiatry, or psychoanalysis. This suggests that all the pioneers had valid insights into personality, but it still remains for us to weigh, verify, and fuse these concepts into a meaningful whole.

Volume I will be of value to those who do research and therapy with young children, while Volume II although a research volume, would be of interest to anyone who has to deal professionally with young children. One awaits however, further writings from Dr. Murphy wherein she summarizes and interprets her experiences with the large number of children she has studied.

ERIC T. CARLSON, M.D.,
New York Hospital,
Cornell University Medical College.

THE FIELDS OF GROUP PSYCHOTHERAPY. Edited by S. L. SHERMAN. (New York: International Universities Press, Inc., 1956, pp. 338. \$6.00.)

This volume contains 19 essays written by different authors, describing various applications of group therapy. Each contributor has had considerable experience with the field he discusses. Thanks to careful editing there is a minimum of repetition and a uniformly high level of organization and style. Each application is set in perspective with respect to its history and its current status, is documented by an excellent bibliography, and amply illustrated with case material.

Small groups appear to be particularly congenial to the American culture. As the editor points out in the introduction, group therapy has "met with peculiar receptivity not only from professionally trained persons and patients, but from the general community as well." (pp. xi) In its various modifications it has become a means of attempting to elaborate almost all forms of personal distress and organizational strain. At its periphery group therapy merges with group discussion techniques and becomes integrated with methods of community and institutional organization. Of the 19 chapters, only 8 are concerned with medically defined patients or settings, such as mental hospitals, addicts, alcoholics, and private practice. The rest cover such topics as delinquents, unmarried mothers, community mental health and industry.

It is instructive to compare this book with its counterpart, the *Practice of Group Psychotherapy* which, under the same editor, appeared in 1947. Besides including a much wider range of topics, the current volume reflects the increased amount of information about group therapy gained in the past decade. The chapters contain more references to the literature and better balanced expositions with more summarizing of experiences, and less individual case studies or excerpts from group meetings. But there has been no appreciable advance in conceptualization, although this has become elaborated in certain areas, or change in the nature of the material presented. The latter still consists almost exclusively of clinical reports of experience. As is true of all reports of psychotherapy, these experiences seem practically always to accord with the therapist's original formulations, leading to the uncomfortable suspicion, for which there is a growing body of evidence, that psychotherapy has a built-in device which causes the patient to produce material confirming the therapist's preconceptions. In this case the theoretical formulation is psychoanalytical.

One reason for the failure to make significant gains in conceptualization or factual knowledge lies in the relative lack of good experimental research. As the chapter on research points out, only about 2 percent of the extensive literature in this field could be classed as reports of experiments, and none of these have produced any fundamental insights or discoveries. Recently several ingenious methods of systematically describing and classifying individual interactions and group therapy processes have ap-

peared, which raises the hope that the next decade will witness real progress in the production of experimentally validated information.

In the meanwhile this book offers an admirable survey of some of the major contributions to the field of group therapy. As such it is highly recommended to all those with a general interest in this field. In addition, anyone wishing to embark on any of the group therapeutic approaches covered in this volume cannot do better than to start by reading the appropriate chapter.

JEROME D. FRANK, M.D.,

Johns Hopkins Hospital.

INTERNAL SECRETIONS OF THE PANCREAS. VOLUME IX. CIBA Foundation Colloquia On Endocrinology. Edited by G. E. W. Wolstenholme and Cecilia M. O'Connor. (Boston: Little, Brown & Co., 1956. \$7.00.)

This CIBA Foundation volume presents the record of a conference held in London in June, 1955 at which 28 experts from 8 countries discussed the chemistry, biochemistry and physiology of the "Internal Secretions of the Pancreas." In some respects the choice of title would appear to be unfortunate since it seems to beg the question of the plurality of the hormonal factors of the pancreas, an issue which is still not completely resolved as the discussions to some of these papers clearly testify.

Reports of conferences such as this make interesting but difficult reading and the difficulties of this particular volume are enhanced by the order in which the papers appear. A grouping of papers with subsequent discussion of the group (as was indeed done in 2 cases) might have eased the reader's task and, one would imagine, have increased the effectiveness of the conference. The somewhat haphazard ordering of the papers is accompanied by great variation in style, from papers which carefully review a whole field to others which are little more than abstracts of recent laboratory activity.

In the first two papers, workers from the University of Hamburg present cytological and biochemical evidence which they feel favors the hypothesis that there is a secretion of the hyperglycemic polypeptide glucagon, by the cells of the islets of Langerhans, and in a later paper, W. Schulze discusses the efforts of M. Burger to confirm this theory. O. K. Behrens and his associates discuss some of the properties of glucagon and E. W. Sutherland presents his very exciting and elegant work on its mode of action at the molecular level. Indeed, as F. G. Young, chairman of the conference, pointed out in his closing remarks, Sutherland's work appears to come close to fulfilling the biochemist's long-cherished hope of providing "an explanation in terms of the influence on enzyme systems of the action of a hormone." But here again the question may be raised as to whether glucagon may be said to fulfill yet the classic criteria for the definition of a hormone. Attempts to show that these criteria are fulfilled are complicated by the fact that, in some cases the hyperglycemic factors appearing in the blood stream are inhibited by

ergotamine, which has no effect on the hyperglycemic action of purified glucagon. And certainly, there does not yet appear to be any pathological condition which can be confidently referred to as "typo- (or hyper-) glucagonism."

On the other hand, of course, the condition of insulin insufficiency has been known for many years. Insulin itself is perhaps the most thoroughly studied protein and F. Sanger gives a description of some of his most recent investigations on the disulphide bonds of insulin which link together the polypeptide chains, of which he had previously determined the complete amino acid sequence. A number of problems remain in this field; E. Fredericq discusses the heterogeneity of insulin preparations and D. F. Waugh and D. S. Hodgkin present thought-provoking papers on the three dimensional structure of insulin. Any final physico-chemical understanding of the mode of action of the protein hormones must of necessity presume a knowledge of their structure and at the present time it seems that the final solution of these structural problems is bound to come from the X-ray crystallographers. It is therefore very gratifying to realize that workers such as Dr. Hodgkin are entering this exceedingly difficult field.

One of the most useful features of the reports of conferences such as this is the opportunity they provide for a direct comparison of the views of the supporters of rival and perhaps, mutually exclusive hypotheses. In the volume under discussion B. Helmreich and C. F. Cori on the one hand and C. R. Park and co-workers on the other hand discuss the evidence which leads the latter to concur with the hypothesis of R. Levine that the increased uptake of glucose by muscle under the influence of insulin is caused specifically by an increase in the rate of a transport process which carries glucose into the cells. It has long been suggested that insulin affects not only the peripheral utilisation of glucose, but, alternatively or in addition, the output of glucose by the liver. The evidence for a direct influence of insulin on hepatic metabolism is most ably reviewed by C. de Duve. Other papers by P. J. Randle, P. P. Foa, M. G. Goldner, J. L. R. and R. R. Candela, and C. Cavallero discuss the physiological interaction of insulin and glucagon with each other and with other hormones. The discussions following each paper are reported and it is to be regretted that there is no explicit statement of the extent to which these reports have been edited. The style often suggests *verbatim* reporting, but there is some internal evidence that the speakers have had the opportunity of reviewing their own comments. A statement of editorial policy on this matter would help the reader to evaluate the ideas presented in the discussion periods.

In conclusion, the CIBA Foundation has once again placed endocrinologists in its debt by holding this conference and publishing this volume. The record in its present form will be of great value to workers in this field but a closer briefing of the attending scientists as to the nature of the communications required and more attention to the order of procedure would have increased the usefulness of

the volume for workers in less closely related areas of biology and medicine.

G. R. WILLIAMS, PH. D.,
University of Toronto.

THE RECOVERY ROOM. By Max Sadove, M.D. and James H. Cross, M.D. (Philadelphia: W. B. Saunders, 1956. \$12.00.)

This is a very instructive, interesting and practical book, combining the work of a number of authorities.

It will be of interest to all medical staff, nursing staff, and administrators. It will be particularly helpful to those who might be contemplating the establishment of a post-anaesthetic recovery room or extension of facilities already available to include what the authors refer to as an "Intensive Therapy Unit" to provide for specialized medical and nursing care in a recovery room area for a prolonged period.

The method of organization of such a unit is set out in detail and in a clear, concise fashion. The principles of the planning are included, as well as suggested plans and diagrams with alternate layouts. Policies to be determined are outlined, as well as staff needs and training. Equipment and supplies required or recommended are listed. There are several chapters devoted to the principles of recovery room management and all specialties are discussed at length.

JOHN E. SHARPE, M.D.,
Toronto General Hospital.

THE PREVENTION OF CRUELTY TO CHILDREN. By Leslie George Housden. (Philosophical Library, Inc. 1956, New York. pp. 379 \$7.50.)

This book is a well-written study of the masses of English children born in the lower economic group from the 19th Century to the present. "Cruelty" to Dr. Housden takes into account the physical, environmental and emotional care of these children. The lack of first-hand knowledge of the existing conditions is similar to those of the past. Interested persons have worked tirelessly to secure better legislation; usually, some personal knowledge does bring results. However, even improved welfare laws do not give the full answer to the problem, nor do they alleviate all the suffering.

Dr. Housden feels strongly that there is need for respect of the individual and the hope of a happy family life before some parents will have the motivation to guard and guide their children. Education of the potential parents before their first-born is really necessary.

Public opinion forces legislators into action today as it has done in the past. The present emphasis should be on prevention rather than suppression. Again, the answer is in education. Punishment and fines by the courts for neglect of children is expensive and does not alter the cause. Overcrowding of homes, poor sanitary conditions, lack of money for food, clothes and other essentials lead to desperation, crime and low morality.

In the 19th Century stern materialism was the attitude of the parents and only the most fortunate were considered to have happiness as a right, let alone a need. Children were expected to justify their existence either by prestige or contributing to family funds. Stern discipline was part of the training for the well-to-do and harshness and ill-treatment among the poor. Children had to work very early, sometimes from 3 years up, often knowing nothing except cold, hunger, toil and weariness. Fortunately, in the present there are better labor laws and much less malnutrition. There is still little value placed on human lives of children where poverty, filth and disease are present. Children are added burdens and if they cannot help provide are deserted, abandoned or turned out to find their own way while the parent or parents drink to continue in their dull routine. Living conditions are deplorable in rural sections as well as in the cities. The poverty of living is reflected in a dearth of family life or opportunity. Having been reared in such a home, many see no need of an attempt for another way of life. Exploitation of children to gain the ends of the parents or other adults is still present.

Dr. Housden has divided his book into three parts. The first part is a description of the conditions children of the poorer economic class lived in, the squalor and the heritage they gained from their parents. The exploiting of these children for personal gain included murder in large numbers.

Part 2 takes in the present lives of children of these parents with the inherited traditions of their class. Many improvements are noted with the major one being in less starvation but conditions still hopelessly below those which could conceivably produce good citizens with happy homes and children. Living standards are far below the lowest standard of decency, disease is still high and the individual worth of low estimate. Education is beginning to help in individual cases, along with the untiring work of many agencies both public and private. Experiments are helping a few to lift their own standards while being punished for their ignorance and neglectfulness. These experiments are costly and are able to reach only a few. It is a big step in the right direction.

Part 3 outlines a program for the future to avoid these conditions of the present, placing emphasis on prevention and education. Practically, this program would be rather expensive in the beginning but far less so over a generation of children,—probably not as costly as the present program of suppression and punishment maintained by the government.

This book is well documented having over 400 references and appendices which would be extremely interesting to the student of social conditions.

The author's study of the National Society for

Prevention of Cruelty to Children from its foundation in 1884 increases the reader's interest by many case studies. Laws and slow changes in legislation, even for social welfare, are often purely dry facts. His sincere belief in the courage of man if given an opportunity is contagious.

Dr. Housden's definition of parentcraft is "the creation around a child of the environment in which it can maintain its inborn expectation of happiness. It is an affair of the spirit. It is seen in the smile which wreathes a childish face in response to affection. Affection is one of its chief ingredients, understanding is the other. It is the latter which must be taught. In good homes it is learned without direct teaching, through the child growing to adolescence in an atmosphere of good parentcraft. It is never forgotten."

The author's crusading zeal is meant to inspire many people to help prepare the way for the younger generation of parents in their happy task of parenthood.

M. V. KIRK, M.S.W.,
Louisville Child Guidance Clinic,
Louisville, Ky.

MEDIZINISCHE PSYCHOLOGIE. By Ernst Kretschmer.
(Stuttgart, Germany: Georg Thieme Verlag,
1956.)

This is the 11th German edition of a famous book—and in the reviewer's opinion, a great book, written by the Dean of German psychiatry, a man who demonstrated his courage, creativeness, critical knowledge and broad scope. The book has been translated into many other languages, including English, but essentially it remains a German book, and will impress some American readers as a rather foreign philosophical and psychological approach to the subject. The first sentence of the book: "Seele nennen wir das unmittelbare Erleben." containing two almost untranslatable nouns—pillars of a subjective approach to psychology—denotes certain aspects of the author's viewpoint. Actually Kretschmer's approach is unique with a strong emphasis on the functional relationship between structure and function of the body and psychological disposition, largely based on his own earlier research. Yet, in spite of such a specific view, this book is one of the best texts in medical psychology.

In this edition the reader will find considerable revision and addition of material in the chapters on psychotherapy. This review of literature is apt and covers not only German but the international literature on the subject. The book is not suited for a basic textbook in American medical schools, but it is a stimulating and comprehensive review and integration for the more advanced student of the field.

F. C. REDLICH, M.D.,
Yale University School of Medicine.

IN MEMORIAM

FREDERICK W. PARSONS, M. D., 1875-1957

With the passing of Frederick W. Parsons, psychiatry lost one of its distinguished figures and we of New York sustained a loss that will be difficult to replace. Dr. Parsons was educated in Buffalo, and received his medical education at the University of Buffalo from which he graduated in 1901. Shortly thereafter he joined the state hospital service and was placed on the staff of the Hudson River State Hospital at Poughkeepsie. He served in that capacity until the United States declared war on Germany. He enlisted in the army medical corps in 1917 and spent some time studying neuroses in London. Shortly after the American Army arrived in France the base hospital #117 for war neuroses was established at La Fauche. Dr. Parsons succeeded Col. Bell as commander of this hospital and had under his command a distinguished series of psychiatrists. He served in this capacity until the signing of the Armistice. When he returned to New York he was appointed medical inspector of the state hospital service and then became superintendent of the Buffalo State Hospital, where he did outstanding work in developing outpatient and occupational therapy facilities and in developing all the facilities of the hospital.

In 1927 after some of the original reorganization, Dr. Parsons was named by the Governor, State Commissioner of Mental Hygiene. He retired in 1937, after hav-

ing effected outstanding advances in the reorganization of some of the faults of the state hospital services.

It was during Parsons' tenure of office that the system was adopted of placing convalescent patients who were about ready to be discharged in thoroughly approved families relatively near the hospital, which was an intermediate step in order to avoid the abrupt change from the close regimentation of the hospital to the complete freedom of civilian life. He was also responsible for the addition of several new hospitals throughout the state, the most notable of which was the Pilgrim State Hospital at Brentwood, Long Island. In his quiet persuasive way he earned the respect, admiration and loyalty of all those who worked under him. He was never too aggressive and always calm, courteous and understanding. Those of us who worked with him were always sure of sound, conservative advice and a wisdom that comes to relatively few. Whenever it was possible he gave enthusiastic support to the ideas of outpatient clinics sponsored and maintained by the staffs of the various state hospitals.

He was a loyal supporter of The American Psychiatric Association and served faithfully on several committees, the most important of which was the budget committee.

EDWIN G. ZABRISKIE, M. D.,
New York City.

MULTIDISCIPLINARY RESEARCH IN SCHIZOPHRENIA

WILLIAM MALAMUD, M.D.,² AND WINFRED OVERHOLSER, M.D.

During the last 25 years we have witnessed a most remarkable increase in research work in schizophrenia. A vast number of publications has accumulated and Manfred Bleuler(1), in his broadly conceived and comprehensively documented review of the literature relevant to this subject for 1941 to 1950, lists 1,100 articles, although he states that he has only covered part of the field. To this we could add what is probably an even greater number for the period following 1950. These publications cover almost every conceivable aspect of research relevant to these problems, basic as well as applied; original investigations and evaluations of research previously done; experimental laboratory work and clinical studies. They deal with the whole spectrum of sciences within the field of human and animal behavior, all the way from genetics to anthropology, including practically all the biological, mental and social sciences. Many of them originated and were carried out within the psychiatric profession itself, but there was also a considerable influx of investigations from a number of allied disciplines. It is quite obvious that this increased activity during recent years was motivated by and received its impetus from a number of factors which resulted from changes in concepts and methods of approach that started early in the first decade of the present century at about the halfway mark in the one hundred years that have transpired since this clinical syndrome was first introduced by Morell in 1856.

From a practical point of view we have to consider, as one of these factors, the pressure of an alarmingly rapid increase in the number of patients. Since methods of successful treatment of these diseases were

almost nonexistent in the early days of this century and the majority of patients admitted were young and remained in the hospitals for long periods, the obvious result was the accumulation of a tremendous backlog of patients. Even at the present time, at least in this country, more than half of the very large number of patients cared for in mental hospitals are schizophrenics. Added to this and considerably augmenting the number of patients was the fact that with Bleuler's concept of a "group" of schizophrenias rather than a single syndrome, the variety of conditions falling into this category has increased to vast proportions not only in terms of patients actually admitted to mental hospitals, but many persons outside the hospitals who manifested the characteristics of these diseases. It is obvious that with the load continually increasing, the need for further knowledge also became more imperative.

The scope of investigative work was further broadened by the increased insight into the psychopathology and manner of development of these diseases, which made it quite apparent that a great variety of etiologic factors were involved. Bleuler's(2) emphasis on the importance of considering physiogenic as well as psychogenic factors, social stresses as well as intrapersonal conflicts, constitutional determinants as well as experiences during the lifetime of the individual, made it necessary to look for the solution of these problems in a number of what were hitherto considered either only peripheral or incidental conditions. The probability of the involvement of chemical processes, genetic factors, endocrine and metabolic causes on the one hand, and social, psychological and cultural factors on the other, while it rendered the whole problem more complex and progressively more difficult to grasp, also brought in more potentialities in terms of avenues of approach and techniques that could be applied. It also became obvious that in this search it was essential to concentrate on the basic sciences

¹ Presented at the Second International Congress for Psychiatry, Zurich, September 1-7, 1957.

² Medical Research Director, Scottish Rite Research Committee, and Professor of Psychiatry, Boston University School of Medicine.

³ Chairman, Scottish Rite Research Committee, and Professor of Psychiatry, George Washington University School of Medicine.

if we were to get down to the fundamentals of the disease rather than to deal with superficial precipitating factors.

Finally, and what was, undoubtedly, the most important factor in producing the main impetus and motivation in this research work, was the introduction of the concept of *dynamics* into the study of the nature and the pathogenesis of personality disturbances. Of the number of contributions that were responsible for its emergence in the study of schizophrenia, that of Eugen Bleuler⁽³⁾ is most fundamental and is symbolized by the very designation that he proposed as a substitute for the previously accepted "dementia praecox." Inherent in the new term, schizophrenia, was not only a more adequate appreciation of the psychopathological phenomena, but the very use of the word "schizein"—a verb implying an on-going, active process rather than the inevitable and static destiny of hereditary degeneration—brought with it the implication of dynamics, both in the development and in the course of the disease with changes through time as the individual adjusts himself not only to environmental conditions, but to the disease itself. The extent of the impact that the introduction of this concept has had on research in psychiatry, as in medicine in general, can only be fully realized when we take into consideration the variety of components that are implicit in the term *dynamics*, the most important of which are as follows:

1. The dynamics of *active participation* in the development of the clinical picture by both the noxious agents and the organism which is affected by them. This concept as it was, for instance, expressed in general medicine by Ludolph Krehl, implies that the complex of symptoms in a disease syndrome at any given time must be regarded as occurring in an organism which is both *object* and *subject* of the disease. Inasmuch as he suffers injury produced by the noxious agents, the patient is object of the disease and the symptoms and signs presented can be regarded as the result of that injury. but as soon as the organism is affected in this manner it begins to adjust itself to the injury and to participate actively in the development of the symptoms by the marshalling

of defense mechanisms and reaction formations in the process of adaptation.

To that extent, the ailing organism is *subject* of the disease. Thus it is, then, that from the very inception of the illness both of these factors are intimately interwoven in determining the presenting clinical picture at any given time. Bleuler, in introducing his concept of primary and accessory symptoms in schizophrenia, has pointed out the importance of taking these two factors into consideration in an attempt to understand the manner of its development.

2. The dynamics of *time*. Freud's⁽⁴⁾ emphasis on the importance of the effects of stressful experiences as they occur during the formative stages of life and the essential role that is played by instinctive forces throughout the growth and maturation of the organism, has brought to our attention the importance of considering the organism not only in terms of the conditions that we see at any given time on the surface, but of the background and the continuous interaction of person and environment throughout its development in producing changes in adjustment and molding the total personality. It is of interest to note that this introduction of the importance of the time factor in the understanding of human nature both in health and in disease, came at about the same time as Einstein pointed out the importance of time in the physical world and Pavlov in the organization of physiological functions.

3. The dynamics of *homeostasis*. This involves a continuum of processes that are at work in the adjustment of the organism to both its internal and external milieu, in the sense that disturbances in balance continually tend towards the establishment of equilibrium and it, in turn, contains the ingredients of disturbing that balance in the process of growth and maturation. In this sense, then, the functions of the organism must always be regarded as a continually changing, fluid process and as long as it is alive it never remains in a state of rest.

4. The dynamics of *relationships* of parts within a whole organism. This concept, first referred to by Plato in pointing out the fact that in the treatment of illness we must take into consideration the function of the

organism as a whole ("olon") as well as the disturbances in any specific part ("meros"), found its application to the study of human behavior more recently in the contributions of gestalt psychology, and, specifically in psychiatry, in Meyer's emphasis on the psychobiological unity of the organism as opposed to a mere juxtaposition of parts such as, for instance, the artificial separation of "organic" and "mental" phenomena. It is this concept that has played an important role in the development of the psychosomatic point of view which, far from being limited in its scope to a few specific syndromes, must actually be looked upon as an important characteristic in all diseases including the group of schizophrenias (5).

The introduction of these concepts has had a profound effect upon the various phases of work in psychiatry, but particularly in the field of research. The change of attitude specifically towards schizophrenia, regarding it as a dynamic process both in its pathogenesis and the course of its development, has provided the stimulus for systematic research with the ultimate goal of developing programs of prevention and treatment. At the same time, it has also served to widen the scope of this work with an emphasis on multiple causality rather than a single etiologic factor. In keeping with this, there has been a progressive trend towards bringing into this field a number of allied basic sciences relevant to human behavior. In the course of time this has opened potentialities for research in a wide range of specialized disciplines, from anthropology and sociology at the one end and biochemistry and genetics at the other. The progress that has taken place in these sciences during the first two or three decades of this century has provided us with a great variety of new methods and techniques, but it has also brought up the need for establishing appropriate methods of communication for the purpose of coordination. It was to be expected that with the progress made in each specific science, the lines of communication tended to become more and more strained to a point where specialists in each one of them actually found it difficult not only to work in unison but even to understand each other's terminology, or to appreci-

ate the implications that are involved. This problem became particularly intensified in the shadowland between the biological sciences on the one hand and the mental and social sciences on the other. It became obvious, therefore, that in order to pursue this work successfully, particularly in the field of basic research, one had to emphasize a multidisciplinary approach in which all of the relevant sciences were included and coordinated through proper means of communication, so that they would make sense ultimately in their application to practical needs.

A good example of the possibility of dealing successfully with both of these needs is represented in the program that for almost a quarter of a century has been conducted on the North American continent under the sponsorship of the Scottish Rite Supreme Council of the Northern Masonic Jurisdiction, 33°, U. S. A., in cooperation with the National Mental Health Association, and we should like to present here a brief description of this program. It was organized in 1933 by the Supreme Council through the inspiration and wise leadership of the past Sovereign Grand Commander, Dr. Melvin M. Johnson (6). Its purpose was to sponsor a variety of research projects in the field of the basic sciences, with the ultimate goal of gaining knowledge concerning the variety of factors that are at work in the causation of schizophrenia, the understanding of the manner in which these factors combine to produce the disease and influence its course and the development eventually of programs of prevention and treatment. Two significant features of this program should be particularly emphasized: a. It was the first organized and concerted plan for multidisciplinary basic research in the field of schizophrenia, and b., it was developed by a humanitarian organization aided by sound medical advice, with the aim of attacking one of mankind's greatest scourges and thus aiding in the cause of human welfare. The emphasis from the very beginning was on patient and systematic investigation into a variety of the basic sciences rather than an attempt to search for quick therapeutic results. Since its inception and until the present day, some 80 projects have been sponsored over the years, the selection and

supervision of these projects being under the direction of a committee representing specialists in the various lines of approach to these problems; at the same time, however, permitting a wide latitude of freedom for the research workers to pursue the particular methods of investigation and objects of inquiry as they saw fit. In order to facilitate communication between the research workers in these widely varying subjects, periodic meetings of the chief investigators have been held at which they presented their material with a view towards adequate communication and in order to keep the main goal in mind.

The program, which was first conceived and set in motion by Dr. Johnson and for a number of years kept in progress by him, was, within the last few years, taken over by his successor, the present Sovereign Grand Commander, Honorable George E. Bushnell(7), whose unbounded enthusiasm and energy have made it possible to increase the scope both of the financial support and the variety of subjects included in this program, and at the same time, with the aid of the committee under the chairmanship of Dr. Arthur H. Ruggles originally and Dr. Winfred Overholser since 1953 and consisting of both professional and lay members (the latter representing the Supreme Council), making it possible to extend the field of investigation while maintaining the aspect of coordination and appropriate communications between the different projects. Currently, 29 such projects are being sponsored by this committee, representing a wide variety of sciences such as genetics, biochemistry, endocrinology, physiology, anatomy, child growth and development, pharmacodynamics, psychopathology, psychology, sociology, and others. The establishment of adequate communication between the workers in the various sciences has succeeded not only in keeping each one of them aware of the results and implications of their fellow workers, but also in the development of closer lines of integration and of combined attacks on these problems by representatives of two or more disciplines. It would be impossible within the limits of this report, to present a comprehensive statement of each one of the projects

that are being sponsored. A few examples, however, may suffice to indicate the trend not only of this particular program but of similar ones that are being developed at the present time throughout the world.

STUDIES IN GENETICS

For a number of years, our committee has been sponsoring the work of Dr. Franz J. Kallmann(8) in the search for a clarification of the important role of constitutional factors in the pathogenesis of these diseases. Basing his work on the results of a number of investigators who have preceded him, and who have utilized as their material primarily the study of the family background of patients suffering from schizophrenia, but realizing the various sources of error that are inherent in such an approach towards the study of genetics, he concentrated most of his efforts on the study of identical twins as compared with non-identical twins and non-twin siblings. The results of Kallmann's studies are well known throughout the world and need no further elaboration, other than to state that he has succeeded in demonstrating that when one of a pair of identical twins develops schizophrenia, the probability of the occurrence of similar maladjustment in the other twin is some 5 to 6 times as great as it would be in non-identical twins or non-twin siblings. This certainly indicates that there is a constitutional vulnerability which is of great importance in the development of these diseases. To what extent this is entirely hereditary or how much of an additional influence occurrences in intra-uterine life may have as determining factors, is not as yet clearly established and must await further investigation. We are also faced with the question of the nature of this vulnerability or what particular functions of the organism it affects. Is it, for instance, a matter of a greater sensitivity and weakness in the organization of any one of the organs of the endocrine system? Is it a matter of disturbance in the autonomic nervous system and its related endocrine functions? Is it a pathological disturbance, quantitative or qualitative or both, in the biochemical—particularly enzyme—func-

tions of the organism? Does it affect the distribution of certain vitally important chemical substances in the nervous system? Or, finally, is it a combination or interaction of several or all of these? Actually, his most recent work(9), especially in the study of pre-adolescent forms of schizophrenia, has concerned itself with the quantitative excretion patterns of a salivary enzyme which acts on red cells by causing exposure to T antigen on the cellular surface. His findings indicate a definite relationship between high receptor-destroying enzyme (RDE) test scores and certain basic constitutional characteristics of families, ascertained through an early case of schizophrenia. It seems plausible to work on the hypothesis that this may be one of the biological bases of the observed family characteristics, and Kallmann is in the process of developing methods for the determination of this reaction, using them in a number of patients suffering from this disease, and in their families. This demonstrates the importance of combining biochemical studies with the work on genetics for the purpose of ascertaining not only the presence of a constitutional factor but also its nature. Another aspect of this study of genetics concerns itself with the importance of investigating the particular conditions under which a vulnerability of this type may then be enhanced by postnatal environmental factors leading to the development of the disease. For this purpose it is essential to study the early environment in infancy and childhood; in other words, to carry on simultaneous studies of child growth and development as observed in normal children and those who eventually may develop the disease.

CHILD GROWTH AND DEVELOPMENT

The workers in this area have been particularly interested in finding the answer to the question of what is the nature of those stress situations that are particularly likely to interact with the constitutional predisposition in providing the basis upon which the disease develops. It is obvious that this can only be done most effectively in the early stages of life beginning with the very first moments of the relationship of the parents,

particularly the mother, to the child, of its relationship to them, the siblings, and the social setting in general. The workers in this field have come to appreciate the fact that it is important to study not only the developing child itself from birth on, but also the conditions that existed before birth, the attitude of the parents, particularly the mother, to the coming child, various problems in the adjustment of the parents themselves, and to gather these data in an objective manner which will not be distorted by possible screen memories and subjective colorings as they come into play in retrospective accounts. A number of our workers are engaged in this study, and in some instances they start their observations with the first months when the expectant mother comes for prenatal examination and advice, namely, about the third month of pregnancy. This is followed by a combination of a study of the mother and her environment during the subsequent course of pregnancy and delivery, and then continues the study of the child as it develops from the first moment of birth on through infancy, childhood, and adolescence. A number of factors have already been shown to be of importance in this regard, as has been demonstrated by the findings of Washburn and Benjamin(10); Putnam, Rank and Kaplan(11); Leo Kanner(12) and his co-workers; William Line(13) and a number of others. This type of a closely integrated program of research in genetics, biochemistry, and child growth and development with all its biological, psychological and social implications, demonstrates both the feasibility and the importance of carrying on co-ordinated research in which, on the one hand, we have the advantage of the contributions of each expert in his specific area of investigation and, on the other, their implications can be rendered more meaningful to real life settings, as their results are supplemented by those of related disciplines.

BIOLOGICAL STUDIES

The progress that has been made in recent years in this area by research in physiology and biochemistry offers a particularly impressive demonstration of the value of

coordinated studies. The basic contributions of scientists like Sherrington, Cannon, Pavlov and others, have provided the foundation for a new trend, shifting the emphasis from static neuropathology to a dynamic orientation and from the preoccupation with specific psychophysical relations of single organs and functions to a more comprehensive study of the organism as a whole, emphasizing the process of integration within the person in his adjustment to life situations. The comprehensive investigations that have been undertaken the last few years in the functions of the endocrine system present a particularly good example of these potentialities. The possible implication of disturbances in the functions of these glands in the adjustment of the organism to life situations has already been indicated in relation to genetics. In the last few years a considerable amount of knowledge has been gathered in regard to the role played by the hypophyseal-adrenocortical system in normal and pathological reactions to stress. Pincus and Hoagland (14), Hemphill and Reis (15), and a number of others (16) have reported that the psychological withdrawal of the schizophrenic patient from active competition and his retirement into an autistic world, are reflected in increasing interference with the function of this system. Similar findings have been reported by Angyal, Freeman and Hoskins (17), in regard to the function of the thyroid, and Funkenstein (18) and others, in the adrenal medulla and autonomic nervous system function. It is true that at the present time we are not in a position to state whether these functions represent primary causative factors or are the effects of disturbances initiated elsewhere. Whichever the case may be, however, once they have been established they begin to participate in the disease process, and a better understanding of the deficiencies involved may make it possible to devise methods of compensating for them and thus prevent further progress of the pathologic process.

Another highly promising lead has been opened by research in certain phases of pharmacodynamics. The introduction of experiments with such substances as lysergic acid, the effects of which are so closely related to

the symptoms observed in schizophrenia, has provided the means of facilitating objective experimental observations in these conditions. Here we find a number of highly promising leads. One of these is found in the work of Hoffer, Smythies, and Osmond (19), which points to the fact that certain metabolites of adrenalin, particularly as they may be found in personality disturbances, are closely related both in their biochemical structure and psychological effects to those of some of the hallucinogenic drugs. Another lead has been furnished by studies of serotonin and the significant fact that this substance, which is found in such large concentrations in the central nervous system, is characteristically antagonistic to lysergic acid and some of the other hallucinogenic drugs. Of further interest in this regard are the vasoconstrictor characteristics of serotonin, and the fact that hypotensive agents such as Serpasil, have recently received so much attention as therapeutic agents in certain personality disturbances.

A variety of other phases in this field have been subjected to study. Philip Bard's (20) work on the effects of ablations of the area of the amygdala in relationship to emotional control, taken in conjunction with the various investigations of the effects of lobotomies, points toward another possibility of coordinating neuro-anatomical and physiological studies and their psychopathological correlates. Finally, the work of Funkenstein (18) on the study of reactions of different types of personalities to stress situations and their relationship to the epinephrin/nor epinephrin ratio further accentuates the concept of dynamic integration between physiological and psychological functions. His observations on the manner of the reaction of different types of persons to stress situations, both in emergencies and the continuous mastery of stress, and in the reaction of the individual to such settings whether directed outwards as anger and possible projection, or depression and introjection, form a link between interferences as observed in studies of physiological functions and their correlates in terms of psychopathological symptom formations. It is particularly interesting to note his studies of the relationships of disturbances of this type as they

are reflected in interferences with thought structure in general and abstract thinking in particular.

PSYCHOLOGICAL AND SOCIOLOGICAL STUDIES

The important role of these areas in our program has already been referred to in the discussion of the close relationship between the biochemical studies and disturbances in the psychological functions of the individual, as well as the importance of taking into consideration occurrences in the early stages of child development as they combine with constitutional factors in leading towards the development of the disease. The effects of faulty child-parent relationship in setting the stage for the development of the disease have been particularly pointed out in a number of studies, such as those of Rank and Kaplan(11), Kaufman and Gardner(21), and others. The frequently observed occurrence of a pathological combination of cold detachment and symbiotic fusion in the mothers of children who develop early manifestations of schizophrenia may well be regarded as playing an important role in the development of ambivalence in the schizophrenic patient. At the same time, the frequently repeated traumatic experiences in such children may also serve as noxious influences in the basic physiological mechanisms of adaptation to stress situations.

The observations of Kaufman and Gardner on the studies of pre-adolescent forms of schizophrenia also indicate the possibility of the effects of conflict situations in the parents as they find their expression in the symptoms observed in the child. Of further importance in this regard are the results of the psychological studies of Piotrowski, on the manner in which energy control is dealt with in the early stages of schizophrenia, as indicated by Rorschach studies. The ratio of available energy contributed by instinctive needs and the control of this energy by the ego, appears to be of great significance in indicating the subsequent course of the disease and its prognosis in psychotherapeutic procedures. At the same time, we find important indications in regard to the nature of the schizophrenic process through the study of the manner in which patients suffering from this disease react to specific

methods of psychotherapy, as has been pointed out by Whitehorn and Betz(22). Finally, we have the gradually accumulating data in regard to the importance of the social setting in which this disease appears to thrive, as has been pointed out by Redlich and his group, the significance of the effects of urban versus rural settings, and the close relationship that exists between anthropological studies of various cultures, as has been shown by the work of Mead and Bateson, William Line in his cross-cultural research, and a number of others.

The results of all of these studies against the background of the concepts that were discussed in the introduction permit at the present time of the development of a general framework of the schizophrenic process, and which can be formulated somewhat as follows: the variety of pathological manifestations as they are observed in the clinical picture of the group of schizophrenics, develop most readily in persons who are constitutionally endowed with a certain predisposition or vulnerability; this has been established on the basis of investigations in genetics. Studies of the developmental process of the individual, particularly in early infancy and childhood, have shown that persons endowed with such vulnerability need not invariably develop this disease but are more likely to become victims of it because of this predisposition, provided that they are exposed to certain traumatic experiences, psychological, social, or physical, during infancy and childhood. This combination results in a series of changes in the growing organism which are expressed in terms of certain types of behavior anomalies, particularly in regard to interpersonal relationships, and at the same time manifest themselves in certain defects in physiological functions. With this as a foundation, the individual is rendered unable to cope with the stress and strain of competitive life situations particularly at critical stages, such as puberty, adolescence, marriage and catastrophic events in mature life. When such stress conditions have to be met, the person is unable to adjust himself to them as adequately as his fellow human beings, and as a result he responds with one or both of two types of reactions. He withdraws to a

greater or lesser degree from the responsibility of dealing with these problems into a state of social, psychological, and physiological isolation both in regard to his internal and external milieu and begins to reconstruct his world on the basis of autism, with the development of projections, distortions, and defects in his physiological reactions to stress.

This point of view is presented merely as a general frame of reference which at the present time serves as a background for the program we have described and a number of others that are now in progress throughout the world. The relevance of the various projects within such a program to the ultimate achievement of our goal is obvious, and it is equally clear that as the scope of such research is broadening and becomes more complex, it will be very important to maintain proper lines of communication, so that while this work continues to be multidisciplinary, it will also be adequately coordinated.

BIBLIOGRAPHY

1. Bleuler, Manfred: *Research and Changes in Concepts in the Study of Schizophrenia, 1941-1950*. Bulletin Isaac Ray Medical Library, January-April, 1955.
2. Bleuler, Eugen: *Am. J. of Psychiat.*, **10**: 203, Sept., 1930.
3. Bleuler, Eugen: *Lehrbuch der Psychiatrie*. Fifth Edition, Berlin: Julius Springer, 1930.
4. Freud, S.: *Collected Papers*. London: Hogarth Press, 1924.
5. Malamud, Wm.: *Organic Factors and Personality Functions. Medicine in a Changing Society*. New York: International Universities Press, Inc., 1957.
6. Johnson, Melvin M.: *Am. J. Psychiat.*, **109**: 707, 1953.
7. Bushnell, George E.: *Allocution, 145th Annual Meeting of the Supreme Council, 33rd, Boston, Sept., 1957*.
8. Kallmann, F. J.: *Heredity in Health and Mental Disorders*. New York: Norton, 1953.
9. Kallmann, F. J.: Paper presented at the Second International Congress for Psychiatry, Zurich, September 1-7, 1957 (to be published).
10. Benjamin, J. D.: *Psychosomatic Medicine*, **14**: 1952.
11. Rank, B.: *Intensive Study and Treatment of Preschool Children in Emotional Problems of Early Childhood*, Editor—G. Kaplan, New York: Basic Books, 1956.
12. Kanner, L.: *Child Psychiatry*, 2nd Edition. Springfield, Illinois: C. C Thomas, Nov., 1948.
13. Line, Wm.: *Personal Communication*.
14. Pincus, G., and Hoagland, H.: *Am. J. Psychiat.*, **106**: 641, 1950.
15. Hemphill, R. E., McLeod, L. D., and Reiss, M.: *J. Ment. Sci.*, **88**: 554, 1942.
16. Malamud, Wm.: *New England J. Med.*, **244**: 908, 1951.
17. Angyal, A., Freeman, H., and Hoskins, R. G.: *Arch. Neurol. & Psychiat.*, **44**: 621, 1940.
18. Funkenstein, D. H.: *Stress and Personality*. Cambridge: Harvard University Press, 1957.
19. Hoffer, A., Osmond, H., and Smythies, J.: *J. Ment. Sci.*, **100**: 29, 1954.
20. Bard, P.: *Personal Communication*.
21. Kaufman, I., Rosenblum, E., Heims, L., and Willer, E.: *Am. J. Orthopsychiat.*, **27**: 4, Oct., 1957.
22. Whitehorn, John C., and Betz, Barbara J.: *Am. J. Psychiat.*, **113**: 901, April, 1957.

HISTORICAL LANDMARKS IN RESEARCH ON SCHIZOPHRENIA IN THE UNITED STATES

W. K. McKNIGHT, M. D., F. A. P. A.¹

The Committee on History of The American Psychiatric Association has been privileged to prepare an exhibit designed to show excerpts from the United States literature on research in schizophrenia for display at the Second International Congress of Psychiatry convened in Zurich, Switzerland, in September 1957. This paper is a summary of this project and has been prepared in collaboration with the various members of the committee.²

The purpose of this study is to report a sampling from the extensive literature on this subject that has developed in the United States during the past 191 years indicating something of the nature and scope of the work. It is intended to offer a survey of the greatest possible variety of topics that have been included by various workers in the United States rather than to present different approaches or schools of thought as they may have influenced clinical understanding and treatment in psychiatry.

From a review of over 3,000 reported studies, examples are described which have reflected research interest and data grouped in accordance with 5 principal categories as follows:

1. Theoretical and clinical concepts.
2. Experimental and biological studies.
3. Epidemiological, statistical and genetic studies.
4. Therapeutic investigations of (a) somatic, (b) psychotherapeutic, and (c) social techniques.
5. Interdisciplinary research.

The references cited have also included those believed to have originated in the United States, as well as those which represented first publications on experiences in

the United States concerning therapeutic techniques developed in Europe. Conditions on clinical, social and statistical aspects of schizophrenia considered to be characteristic of certain conditions in the United States. In general, the present summary may serve to indicate primarily what has been done and the methods employed.

During the earliest years of historical development in the United States, most of the prevailing psychiatric thought or medical concern about emotional illness reflected the ideas then current in Europe. Prior to the year 1850 the terms "schizophrenia" and "dementia precox" were not in use. No carefully formulated research programs were recorded until late in the 19th century; but in 1812, Benjamin Rush published his well known treatise, *Medical Inquiries and Observations on the Diseases of the Mind* (1).

By 1890 psychiatry as a specialized branch of medicine had become sufficiently organized for the consideration of clinical findings to be reported at the regular meetings of the American Medico-Psychological Association, which had been established in 1844. Noting a regrettable lack of well organized research interests and activities, S. Weir Mitchell, as noted in *American Psychiatry 1844-1944* (2), in 1894, addressed the Association expressing criticism of the group of "lack of careful scientific report." Increased interest in this aspect of clinical work (3, 4) then became apparent, and in 1900 the National Committee on Mental Hygiene (2) had begun to have "a general stimulating effect in research." From 1903 until 1910 (5, 6, 7) and for many years thereafter, Adolf Meyer (6, 7), working at the Worcester State Hospital, the Manhattan State Hospital, and subsequently at the Johns Hopkins Hospital, was a leading figure in early research in schizophrenia in the United States.

Early references (5) indicate that, "Meyer worked toward a more really dynamic-genetic interpretation of the psychoses and introduced the concepts of dementia precox there." Lewis (6), in referring to this early

¹ Physician-in-Charge, Outpatient Department, The New York Hospital—Westchester Division, White Plains, N. Y.

² Robert S. Bookhammer, M. D., Philadelphia, Pa., Chairman; Leo Alexander, M. D., Boston, Mass.; Henry Babcock, M. D., Cambridge, Mass.; J. Sanbourne Beckoven, M. D., Providence, R. I.; F. Freyhan, M. D., Farnhurst, Del.; William K. McKnight, M. D., White Plains, N. Y.

work stated further that, "published contributions from 1903-1905 and 1906 developed a conception of dementia precox as depending on a special personality and constitution and on habit disorganization, leaving the internal working and development of the function and structural deficit as possibly incidental and still to be worked out." This constitution-psychogenic scheme was further developed by Hoch(8, 9), Jelliffe(5) and others and tended to characterize much of the American work in this field. In 1909 Hoch and Amsden(8) published observations on schizophrenic patients which have continued to influence the thinking of present day workers when they described traits which they considered demonstrated the "shut-in personality." Hoch also referred to a study of 100 cases by Kirby^{*} which he reported to the New York Academy of Medicine in 1910. Hoch and Amsden stressed the importance of the *detailed personality study*.

Concurrently with several of Meyer's contributions, E. E. Southard(10) in July of 1910 reported further on "A Study of Dementia Precox," in which he examined autopsy material for evidences of organic change which he found "not wholly convincing." He did, however, describe morbid alterations in the convolutions of the brain indicating a localization of several groups of symptoms. In addition, he offered 17 fairly concise "constitutional factors"(11) in dementia precox. In 1924 Dunlap(10a) reported no verifications of Southard's work and offered well controlled evidence to refute his conclusions, stating that his study did not show "even a suspicion of a consistent organic brain disease as a basis for the psychosis."

Studies having to do with *Theoretical and Clinical Concepts* began with the observations of Benjamin Rush(1) as noted above. Another early effort to stimulate sound research interest and methods was a presentation by Spitzka(12) in 1878 when he verbalized criticisms of preoccupations with non-medical activities by many of the superintendents of state hospitals and urged that efforts be directed "to exhibit the organic connection existing between psychiatry or

mental pathology and that branch of general pathology which relates to the nervous system." The beginning dynamic quality of research interest utilizing improved research techniques was presaged by Meyer(13) and Hoch(14) when, in 1903, he said "All these considerations will, I hope, make clear that the constitutional abnormalities which we have described, and which in their most marked form probably represent the direction in which the important traits lie, must be the expression of dynamic forces of great importance." This type of thinking was further developed by Jelliffe(15) in 1911.

In 1912 Bond(16) studied a series of 50 patients having dementia precox. (It is of interest to note that in this study the special "shut-in" personality was found in only 20% of the schizophrenic groups.)

In 1931 the Association for Research in Nervous and Mental Diseases devoted Volume X of their "Proceedings" to the subject of "Schizophrenia" and Strecker(17) reviewed a series of 25 patients initially studied several years before with reference to various prognostic opinions expressed at that time. He found that "chances of satisfaction by reality" could be considered as "a highly important prognostic factor." As part of the same symposium, Campbell(18) working with a prominent statistician reported on the percentages of cases considered to have "positive environmental stress as an etiological factor" in schizophrenic patients diagnosed during the years 1923 through 1926 at the Boston Psychopathic Hospital. A further study at that time by Bowman and Raymond(19) reported on 2,444 cases, of which 909 were schizophrenic, and a new method of coding personality traits was described. An evaluation of "maturity" in personality was made by Sullivan(20), in which 100 cases were studied over a period of 7 years demonstrating that patients suffering the illness through an acute onset appeared to show more "maturity" which was directly related to a favorable prognosis.

Several hundred cases were studied by Lewis(21) in 1923 based on findings in autopsy material with evidence of frequent "developmental and acquired peculiarities in the circulatory and glandular systems" which he considered to be "a characteristic constitu-

^{*} Not published.

tional finding in the catatonic and hebephrenic reactions."

The important concept of impairment of abstract thinking was discussed by Bolles and Goldstein(22) in 1938 after they had done extensive work utilizing psychological methods of investigation similar to those introduced by Vigotsky confirming and expanding the conclusions of the latter worker. Hanfmann and Kasanin(23) in 1942 reported similar investigations based on the use of the "concept formation test" as introduced by Ach and modified by Saharov using more strictly controlled conditions.

In 1944 attention was directed to symptoms in children by Kanner(24) who reported on a 6-year study of 20 children "whose behavior differed uniquely and markedly from anything reported so far." These behavior patterns were referred to as "early infantile autism." In 1953 Bender(25) referred to work with children by Potter, Meyer, Kanner, Despert, Mahler and others in her report on 18 years of clinical and research experience relating to 626 children who had been diagnosed as schizophrenic from ages 2 to 14. She stated "... we find that the schizophrenic infant retains all of the embryological features which have been outlined for the fetal infant by Gesell" and that "... anxiety is these children's first response and may be unremitting from the first day of life, or ... appear at any time later." In this study, diagnostic criteria were outlined together with indications for adequate follow-up studies.

Experimental and Biological Studies have also covered a wide range of investigative approaches. For example, in 1925 Bowman(26) reported a detailed study of 24 patients by means of various laboratory tests having special relationships to endocrine functions. He was led to the conclusion that "the results are not consistent with the constant presence of any definite endocrine disorder and do not suggest that a simple glandular dysfunction is an etiological factor in schizophrenia; (rather) it may arise on a number of different bases." Hoskins and Sleeper(27) did an extensive study in 1929 at the Worcester State Hospital in which they studied 80 cases by means of carefully controlled research techniques indicating that

while endocrine deficiency would be considered as playing a significant role in dementia precox, their findings led them to believe that this illness "... is a reaction trend ... a disorder of multiple causation." Work begun in Holland in 1920 was subsequently continued in the United States from 1932 until 1945 by DeJong (28) on the significance of experimental catatonia using bulbocapnine, mescaline, and other medications. Further studies in *The Biology of Schizophrenia* were published by Hoskins(29) in 1946 covering intensive investigations over a period of 18 years. In this work findings pointed significantly to defects in normal "maturation" which occur for reasons not yet understood in certain individuals. Further work from the Worcester Foundation for Experimental Biology was reported in 1949 by Hoagland and Pincus(33) which was based on deficient "typical adrenal-cortex response to short, acute stress in psychotic men generally." The authors were unable to localize the point of origin in the block in the alarm reaction but evidence was apparent "that those hormonal mechanisms involving homeostatic adjustment are the ones that seem to be malfunctioning." Observations on "cytological changes in nerve cells in dementia precox" were reported by Papez and Bateman(31) in 1949 in which "three stages of nerve cell disease were revealed." They considered their findings to be confirmatory of those by Winkelman and Book.

During the past few years much attention has been directed to the effects of newly developed chemical and pharmacological agents, notably the "tranquilizing" group of drugs. Feldman(32) in 1956 reported a comparative study of various ataractic drugs used with 1,238 patients, most of whom were chronic schizophrenics. In 1957 Heath(33) reported further attempts to determine the nature of the metabolic abnormalities in schizophrenia based on studies of an apparent alteration in adrenaline metabolism.

"Electroencephalographic Studies of 1,000 Schizophrenic Patients" were reported in 1956 by Colony and Willis(34). All patients in this group were males and the findings were considered as "... support for

the belief that schizophrenia is a functional disease of psychological origin."

Epidemiological, statistical and genetic studies have also been fairly numerous though less so than reports on treatment methods. An early study from the epidemiological viewpoint was that conducted by Pollock and Knowland (35) in 1921 when first admissions to civil state hospitals in New York State from 1915 until 1920 were examined. In 1933 Pollock, Malzberg and Fuller (36) carried out a detailed statistical study from which the conclusion was drawn that "... as previously indicated, this establishes a presumption in favor of heredity as a general factor in the causation of mental disease." In 1939 Malzberg (37) did a follow-up study on the important work done previously by him, surveying the outcome of insulin treatment with 1,000 patients in the New York state hospitals. In his first research, he indicated that 65.4% of the patients treated "... thus showed some degree of improvement after treatment with the insulin." In the 1939 study, he reinvestigated each patient one year after treatment was finished, and learned that a total of 49% were still "improved to some degree."

In an effort to provide a more uniform basis for statistical evaluation, Malamud and Render (38) reviewed the literature in which they found "... so few well systematized studies and so little agreement in the conclusions reached on the course and prognosis of this disease." Studying 309 patients over a period of 8 years (1929-36) a "standard diagnosis" was used.

This work included also a discussion of various well-defined factors to be used as the basis for further comparative studies by others.

In 1946 "The Genetic Theory of Schizophrenia; an Analysis of 691 Schizophrenic Twin Index Families" was prepared at the New York State Psychiatric Institute and Hospital by Kallman (39) in which the case histories of 1,382 twins were studied. The results therein reported included the two following summary statements: (a) "The predisposition to schizophrenia, that is, the ability to respond to certain stimuli with a schizophrenic type of reaction, depends on the presence of his specific genetic factor

which is probably recessive and autosomal; (b) the *genetic* theory of schizophrenia does not invalidate any psychological theories of a descriptive or analytical nature. It is equally compatible with the psychiatric concept that schizophrenia can be prevented as well as cured."

In 1954 Ripley and Wolf (40) presented a unique study in which 341 schizophrenic patients treated by the authors in a combat zone during warfare were followed up after periods varying from 5 to 8 years. The interesting finding in this study indicated that such reactions were not to be considered as "benign" nor different than in civilian life as had been supposed by other observers.

Further statistical studies relating to the effect of insulin treatment were done by West and others (41) who reported on 781 patients treated by this method from 1936 to 1951. It was noted in this study, however, that "... this restoration was not necessarily accompanied by a permanent correction of the factors that predisposed the patient to regress in schizophrenia." A comprehensive review of the effects of various therapeutic methods was reported in 1953 by Zubin (42) in which the need for more adequate means of standardizing statistical studies was further demonstrated.

From the standpoint of *therapeutic investigations*, the application of various *somatic* methods has received much attention. Among the first such studies was that by Ray (43) in 1854 when he spoke with conviction of his experience with the use of etherization in the treatment of mental illness as he cited his experience with about 250 treatments for 25 patients at the Butler Hospital.

In 1931 Bleckmann (44) reported on "The Use of Sodium Amytal in Catatonia," describing the effect of this treatment in 15 cases, concluding that this was a useful method for making patients more accessible to psychotherapy. It is believed that this technique had not previously been reported in any of the literature on schizophrenia. Further experience with this form of treatment was recorded by Lindemann (45) in 1932 who compared the effects of the drug on 30 patients with its effects on 6 normal persons.

The use of amphetamines in the treatment

of the psychoses is also thought to have originated in the United States and was reported on by Davidoff and Reifenshtein(46) in 1949.

In addition to various studies mentioned above, a great number of research projects having to do with the use of convulsive therapy have been reported in the literature. Representative of such research have been projects by Bookhammer and Saxe(47) in 1939 in which 29 cases of schizophrenia and other psychotic reactions were treated by means of metrazol, a study by Bennett(48) on the use of curare in electroshock in 1941, and a report of electroshock used over a period of 10 years by Kalinowsky(49) reported in 1949.

The use of electronarcosis as a treatment method was reported in 1945 by Tietz, *et al.* (50) who treated a series of 47 patients with results indicating this form of treatment to be "definitely superior to electroshock" and "approximating those of insulin shock therapy."

Modifications of the original techniques in the use of insulin shock therapy were devised by Shurley and Bond(51) at the Institute of the Pennsylvania Hospital where rapid sensitization to the drug was achieved by giving relatively large doses of the drug after which the coma effect was maintained by a relatively small dosage. This method was considered to be safer and more adequately subject to control so that it came to be employed in various treatment centers including those of the United States Army. Improvement rates were reported as being from 37% to 48.8%.

From about 1935 attention was directed to the use of psychosurgery in accordance with various techniques so that by 1948 a substantial number of cases had been reported. Watts and Freeman(52) summarized their pioneer work in the United States with these techniques and in 1949 Freeman(53) reported further on follow-up studies. By this time it was apparent that "choice of patient, choice of operation and choice of family" were important factors in obtaining the most effective results from this type of therapy. In 1949, also, Pool, Heath and Weber(54) reported on the indications, techniques and post-operative management of topectomy.

Psychotherapeutic approaches have been many and varied and no single review of this large section of American psychiatric literature would do justice either to the quantity or to the type of work done. An interesting early study done by Lombouré(55) in 1912 had to do with the "re-education of dementia precox cases and industrial training of the chronic cases." In 1917 Coriat(56) presented a consideration of the use of psychoanalytic insights in the treatment of the disease in which he reported his conviction that "... an attack of the fundamental characteristics of the disease has been possible only with the development of psychoanalysis."

In 1929 Brill(57) presented a comprehensive review of the various psychotherapeutic concepts as they applied to schizophrenic patients in an effort to add to the dynamic understanding of symptom formation. Further applications of analytic concepts in therapy were reported by Zilboorg(58) at the Bloomingdale Hospital (New York Hospital—Westchester Division) in 1931 and he presented one case in detail. He considered that "the analytical method in its classical form, preceded by a preliminary and rather long period of analysis of the 'reality principle,' mobilizes the masses of affective energies which otherwise remain shut-in and prevent a proper contact with reality."

In 1931, also, Sullivan(59) demonstrated various methods of eliciting socializing responses from patients followed by further efforts toward re-integrating personality on the basis of psychoanalytic procedures. In 1939 Fromm-Reichmann(60) reported her experience with schizophrenic patients whom she found to be "capable of developing workable relationships and transference reactions."

Following an extensive experience in military psychiatry during World War II, the use of various group psychotherapeutic techniques with schizophrenic patients appeared frequently in the literature. An example of such concepts is recorded by Abrahams(61) who worked intensively with 25 schizophrenic patients residing in a maximum security ward of the St. Elizabeth's Hospital in Washington, D. C. in 1948. In this group of severely compromised patients, he found

that his research "demonstrated that schizophrenic individuals can be led into psychotherapeutically effective relationships with each other in a group setting through the exercise of a special type of group leadership." In 1954, a study of the relationships existing between physicians and their schizophrenic patients was reported on by Whitehorn and Betz(62) at the Henry Phipps Psychiatric Clinic in Baltimore in which significant aspects of the therapist's attitude and approach were evaluated. In this series of 100 patients, it was noted that best improvements appeared to occur "when the physician, in his day by day tactics, makes use of active personal participation rather than the patterns of passive permissive, interpretation and instruction for practical care."

Much of the work in studying and treating *childhood schizophrenia* in the United States has been stimulated by Bender, Despert, Bradley and others. In 1955 Bender and Gurevitz(63), reported on various concepts reflecting their experiences over a period of 20 years in this field. Their experience had led them to think of schizophrenia in childhood as being "... a developmental lag at the embryological level of the biological processes from which subsequent behavior evolved by maturation, characterized by an embryonic plasticity in all functioning areas and leading to anxiety and secondarily to defense mechanisms."

The development of treatment methods for large numbers of patients has perhaps been more prominent in the United States than elsewhere and there has accumulated an extensive literature having to do with the *social management* of patients. Typical of research efforts in this vein have been those reported by Myerson(64) in 1939 which demonstrated "... an amplification and synthesis of well known methods of approach to treatment of chronic schizophrenia. The only claim to originality (here) lies in the general underlying theory and in the aggregation of forces used, this being the basis for the term 'total push.'" One specific objective was to prevent the "prison psychosis" type of hospital influence which tended to reinforce the disease tendencies, i.e., withdrawal. Emphasis on the effectiveness of

hospital milieu therapy was also reported by Cheney and Drewry in 1938(65) based on a follow-up study of 500 schizophrenic patients in a private hospital, at the Bloomingdale Hospital in 1938 and subsequently at the same hospital (New York Hospital—Westchester Division) by Wall and Hamilton(66). "Patient government; New Form of Group Therapy" summarized a 3-year experience by Hyde and Solomon(67) at the Boston Psychopathic Hospital in 1950.

A form of research in schizophrenia considered to have had its origin in the United States is that of multi-disciplinary research as a well organized endeavor. Representative of this method have been projects such as that by Hoskins and others(68) at the Worcester State Hospital in 1933 in which some 500,000 quantitative observations were made in accordance with careful statistical methods employing the use of laboratory, psychological and psychiatric "tools" of various types which were used in relation to one another. In 1953 Johnson(69) referred to the important research program sponsored by the Supreme Council of the Thirty-third and Last Degree of the Ancient, Accepted Scottish Rite of Free Masonry for the Northern Masonic Jurisdiction of the United States. He observed that researchers had not coordinated their work. Money was first authorized in 1934 and the first research was published by N. D. C. Lewis as *Research in Dementia Praecox*(70). Lewis' appointment as the first field representative and coordinator of research was made in cooperation with the committee of what was then known as the National Committee for Mental Hygiene and a committee of the Supreme Council. Annual appropriations were provided and coordination has been by informal meetings with written reports annually by the Director of Research to the joint committees appointed by NAMH and the Supreme Council. To date about one million dollars has been provided and recently one million was set aside with additional gifts as the "Benevolent Foundation of the Supreme Council," including grants supporting an important survey of world literature by Bellack in 1947(70a).

In 1953 Greenblatt and Solomon(71) reported on a series of 116 cases studied by

means of the collaborative support of various governmental and philanthropic agencies done in reference to psychosurgical techniques for 500 chronically ill patients. Of this number, 116 cases were studied by means of various multi-disciplinary techniques. In 1954 Heath(72) reported on *Studies in Schizophrenia; a Multi-disciplinary Approach to Mind-brain Relationships* at Tulane University, Department of Psychiatry and Neurology. In this work, utilizing the disciplines of psychiatry, psychology, biochemistry, neurology, and neuro-surgery, evidence was presented indicating that "schizophrenia may be considered to be a disorder of the lower levels of integration . . . with impairment of the sub-cortical levels of the nervous system."

In 1955 Volume II of "*Medical Research—a Mid Century Survey*" published by the American Foundation(73) included an important review of the problem of schizophrenia and its treatment with emphasis on the inter-action of physiological, psychological and social factors. The United States Congressional Act of 1955, providing for a 3-year survey on all aspects of mental illness was cited and current efforts to close the gap between the psychological and the organic concepts of the disease were highlighted, together with current objectives, including plans for more extensive studies of normal persons in relation to schizophrenic processes.

In June of 1956, The American Psychiatric Association published the fifth in a series of "Psychiatric Research Reports" entitled "Research Techniques in Schizophrenia"(74). This study represented 5 stimulating and argument-provoking approaches to the problem, including the work by Whitehorn(62) having to do with the relationship of the therapist to the outcome of therapy in schizophrenic patients previously mentioned.

CONCLUSION

In an effort to highlight the type and extent of research in schizophrenia in the United States during the past 190 years various references have been described according to certain categories of investigation. While no single review of all the studies

which comprise the literature to date is intended, it is believed that from a historical standpoint the present contribution may be of interest and use. The research projects reported all contain bibliographies which in themselves are additionally representative of many studies of importance and of the scope of the subject under consideration.

The author wishes to acknowledge the work done by the various members of the Committee on History of the American Psychiatric Association who collaborated in the compilation of this material, samples of which have also served as the basis for an exhibit presented at the Second International Congress of Psychiatry.

BIBLIOGRAPHY

EARLY HISTORY

1. Rush, Benjamin: *Medical Inquiries and Observations upon the Disease of the Mind*. Philadelphia, 1812.
2. American Psychiatry, 1844-1944: American Psychiatric Association, Columbia University Press, 1944.
3. Cowles, E.: *Am. J. Insan.*, 51: 1894.
4. Cowles, E.: *Am. J. Insan.*, 52: 1895.
5. Assoc. for Research in Nerv. and Ment. Diseases, 5: 1925, "Schizophrenia, Part I."
6. Lewis, N. D. C.: "Constitutional Factors in Dementia Precox"—*Nerv. and Ment. Dis. Pub. Co.*, Monograph, 1923.
7. Meyer, A.: *J. Abnor. Psychol.*, 5: 274, 1910, 1911.
8. Hoch, A.: *J. Nerv. & Ment. Dis.*, 36: 1909.
9. Hoch, A.: *Rev. Neur. and Psych.*, 8: 1910.
10. Southard, E. E.: *Am. J. Insan.*, 67: 1910.
- 10a. Dunlap, C. B.: *Am. J. Psychiat.*, 9: 3, 403, Jan. 1924.
11. Lewis, N. D. C.: "Constitutional Factors in Dementia Precox"; *Nerv. and Ment. Dis. Pub. Co.*, Monograph, 1923.

THEORETICAL AND CLINICAL CONCEPTS

12. Spitzka, E. C.: *J. Nerv. & Ment. Dis.*, 5: 201, April 1878.
13. Meyer, Adolf: *J. Abnorm. Psychol.*, 5: 274, 1910.
14. Hoch, A.: *Rev. Neur. & Psych.*, 8: 1910.
15. Jelliffe, Smith E.: *J. Ment. & Nerv. Dis.*, 38: 1, Jan. 1911.
16. Bond, E. D., and Abbott, E. S.: *Am. J. Insan.*, 68: 359, 1911-12.
17. Strecker, E. A.: "Prognosis in Schizophrenia." *Schizophrenia Assoc. Research in Nerv. & Ment. Dis. Vol. X. The Williams & Wilkins Co., Baltimore, 1931*, p. 119.
18. Campbell, C. Macfie: "Observation on the Role of Environmental Factors in Schizophrenic Conditions." *Schizophrenia Assoc. Res. Nerv. & Ment. Dis. Vol. X. Williams & Wilkins Co., Baltimore, 1931*, p. 43.

19. Bowman, K. M., and Raymond, A. F.: "A Statistical Study of the Personality in Schizophrenic Patients." *Schizophrenia Assoc. Res. Nerv. & Ment. Dis. Vol. X.* Williams & Wilkins Co., Baltimore, 1931, p. 48.

20. Sullivan, H. S.: "The Relation of Onset to Outcome in Schizophrenia"; *Assoc. for Research in Nerv. & Ment. Dis. Vol. X*, Williams & Wilkins Co., Baltimore, 1931, p. 111.

21. Lewis, N. D. C.: "The Constitutional Factors in Dementia Precox with Particular Attention to the Circulatory System and to some of the Endocrine Glands." *Nerv. & Ment. Dis. Monograph. Ser. No. 35*, New York and Washington, 1923.

22. Bolles, N., and Goldstein, K.: *Psychiat. Quart.*, 12: 42, 1938.

23. Hanfmann, Eugenia, and Kasanin, Jacob: "Conceptual Thinking in Schizophrenia." *Nerv. & Ment. Dis. Monograph*, 1942.

24. Kanner, Leo: *J. Pediat.*, 25: 211, 1944.

25. Bender, Lauretta: *Psychiat. Quart.*, 27: 663, 1953.

EXPERIMENTAL AND BIOLOGICAL STUDIES

26. Bowman, K. M.: *Assoc. Res. in Nerv. & Ment. Dis.*, 5: 262, 1925.

27. Hoskins, R. G., and Sleeper, F. H.: *Endocrinology*, 13: 245, 1929.

28. DeJong, J. H.: *Experimental Catatonia*. Baltimore: Williams and Wilkins & Co., 1945.

29. Hoskins, R. G.: *The Biology of Schizophrenia*. Norton & Co., 1946.

30. Hoagland, Hudson, and Pincus, Gregory: *Ann. NY Acad. Sci.*, 50: 635, 1949.

31. Papez, J. W., and Bateman, J. F.: *J. Nerv. Ment. Dis.*, 110: 425, 1949.

EPIDEMIOLOGICAL, STATISTICAL AND GENETIC STUDIES

32. Feldman, P. E.: *Am. J. of Psychiat.*, 113: 7, 589, Jan. 1957.

33. Heath, R. G.: "Pharmacological & Biological Approaches to Psychotherapy"; "The Scientific Papers" of the 113th Annual Meeting of APA in Summary Form, May 1957.

34. Colony and Willis: *Am. J. Psychiat.*, 113: 2, 163, Aug. 1956.

35. Pollock, H. M., and Nolan, W. J.: *State Hosp. Quart.*, Utica, N. Y., 7: 38, 1921.

36. Pollock, H. M., Malzberg, B., and Fuller, R. G.: *Psychiat. Quart.*, 7: 450, 1933.

37. Malzberg, Benjamin: *Ment. Hygiene*, 23: 641, Oct. 1939.

38. Malamud, William, and Render, Norman: *Am. J. Psychiat.*, 95: 1035, 1939.

39. Kallman, Franz J.: *Am. J. Psychiat.*, 103: 309, 1946.

40. Ripley, H. S., and Wolf, Stewart: *J. Nerv. Ment. Dis.*, 120: 184, 1954.

41. West, Franklin H., and Others: *Am. J. Psychiat.*, 111: 583, 1955.

42. Zubin, Joseph: *J. Nerv. Ment. Dis.*, 117: 95, 1953.

THERAPEUTIC INVESTIGATIONS—SOMATIC

43. Ray, Isaac: *Am. J. Insan.*, 11: 164, 1854.

44. Bleckmann, William J.: *Proc. Assoc. Res. Nerv. Ment. Dis.*, 10: 224 (Schizophrenia), 1931.

45. Lindemann, Erich: *Am. J. Psychiat.*, 88: 1083, 1932.

46. Davidoff, Eugene, and Reifenshtein, E. C., Jr.: *Psychiat. Quart.*, 13: 127, 1939.

47. Bookhammer, Robert S., and Saxe, Earl: *J. Nerv. Ment. Dis.*, 90: 489, 1939.

48. Bennett, A. E.: *Am. J. Psychiat.*, 97: 1040, 1941.

49. Kalinowsky, L. B.: *Bull. NY Acad. Med.*, 25: 541, 1949.

50. Tietz, Esther Bogan, and Others: *Am. J. Psychiat.*, 101: 821, 1945.

THERAPEUTIC INVESTIGATIONS; PSYCHO-THERAPEUTIC

51. Shurley, J. T., and Bond, E. D.: *V. A. Tech. Bull. TB*, 10: 501, 1948.

52. Watts, J. W., and Freeman, W.: *Am. J. Surg.*, 75: 227, 1948.

53. Freeman, Walter: *Am. J. Psychiat.*, 105: 581, 1949.

54. Pool, J. Lawrence; Heath, R. G., and Weber, J. J.: *J. Nerv. Ment. Dis.*, 110: 464, 1949.

55. LaMoure, C. T.: *Proc. Am. Med. Psychol. Assoc.*, 19: 263, 1912.

56. Coriat, I. H.: *J. Abnorm. Psychol.*, 12: 326, 1917.

57. Brill, A. A.: *Am. J. Psychiat.*, 86: 519, 1929.

58. Zilboorg, Gregory: *Proc. Assoc. Res. Nerv. Ment. Dis.*, 10: 191 (Schizophrenia), 1931.

59. Sullivan, H. S.: *Am. J. Psychiat.*, 88: 519, 1931.

60. Fromm-Reichmann, Frieda: *Psychoanal. Quart.*, 8: 412, 1939.

61. Abrahams, Joseph: *Am. J. Psychiat.*, 104: 613, 1948.

62. Whitehorn, John C., and Betz, Barbara J.: *Am. J. Psychiat.*, 111: 321, 1954.

63. Bender, Lauretta, and Gurevitz, Saul: *Am. J. Orthopsychiat.*, 25: 162, 1955.

THERAPEUTIC INVESTIGATIONS—SOCIAL MANAGEMENT

64. Myerson, Abraham: *Am. J. Psychiat.*, 95: 1197, 1939.

65. Cheney, C. O., and Drewry, P. H.: *Am. J. Psychiat.*, 105: 5, Nov. 1948.

66. Wall, J. H., and Hamilton, D. M.: *Am. J. Psychiat.*, 105: 5, Nov. 1948.

67. Hyde, R. W., and Solomon, H. C.: *Digest Neur. & Psychiat.*, 18: 207, 1950.

INTERDISCIPLINARY RESEARCH

68. Hoskins, R. G., and Others: A.M.A. Arch. Neur. Psychiat., 30: 388, 1933.
69. Johnson, Melvin, M.: Am. J. Psychiat., 109: 707, 1953.
70. Lewis, N. D. C.: "Research in Dementia Precox". (Masonic Research Project), published by National Committee for Mental Hygiene, New York, N. Y., 1936.
71. Bellack, L.: Dementia Precox; Grune & Stratton, 1947.

71. Greenblatt, Morton, and Others: "Frontal Lobes and Schizophrenia", Grune & Co., New York, 1953.

72. Healy, Robert G.: "Studies in Schizophrenia: a Multi-Phase Survey Approach to Mental Hospitalists", Harvard Univ. Press, 1954.

73. The American Psychiatric Association: "The Schizophrenia Survey", Chapter 10, "Mental Hospitalists: a Midcentury Survey", Vol. II, New York, 1956.

74. Amer. Psychiat. Assoc.: "Research Techniques in Schizophrenia", Psychiat. Research Reports No. 5, June 1959.

SOME MOTOR ASPECTS OF SCHIZOPHRENIA: AN EMG STUDY

GEORGE B. WHATMORE, M. D., PH. D.,¹ AND RICHARD M. ELLIS, JR., B. S. IN E. E. E.

We cannot get an accurate picture of the neurophysiology of neurosis and psychosis unless we include in our efforts a study of their motor components. A fact often overlooked is that motor activity within the central nervous system is intimately tied up with sensation, emotion, and thinking. There are no boundaries to separate these activities. An understanding of the neurophysiology of any of these, as well as their deviations in illness, must therefore include a description of the motor component. Present evidence and current thinking of numerous investigators favor the view that motor activity is more than just an end-product of psychic activity (1, 2, 4, 12, 18, 19, 20, 25, 26, 27, 28, 30, 31, 32, 33).

Compared to the neuroses and psychosomatic disorders, schizophrenia has received little study from a motor standpoint. Measurements of overt movement as well as of electromyographic activity during subjection of patients to certain stress situations have demonstrated greater degrees of motor reaction in schizophrenics than in control subjects (22, 24). EMG studies of the speech musculature in schizophrenics, combined with other observations, led Gould to the conclusion that auditory hallucinations were due to a motor disturbance of the speech mechanism rather than to a disturbance of perception (8, 9).

The studies to be reported in this paper² deal with electromyographic measurements of the low levels of residual motor activity found in persons endeavoring to rest and re-

lax as completely as possible in a quiet comfortable environment. Residual motor activity is for the most part invisible to the naked eye.

APPARATUS

In order to study these low levels of resting activity in the motor portion of the nervous system by electromyographic methods, it was necessary to design and construct an instrument that would give suitable readings. Jacobson and associates have previously described an integrating neurovoltmeter for recording such activity (13, 14). Our instrument was patterned after theirs but is different in certain significant respects.

The instrumentation requirements of this investigation were primarily to pick up, amplify, and indicate the muscle action potentials located on the surface of the skin. One read-out was to be an indication of the instantaneous level of activity. In addition, an integrator must accumulate the potential for a definite period of time so that it may be recorded periodically.

The weakest electrical signal that can be detected is always limited by the noise level in the first stage of the amplifier. As we were interested in measuring voltages at as low a level as possible, it was of the greatest importance to design a pre-amplifier with great care.

Thermal noise in the first vacuum tube may be considered the only source of noise over which we have no control. Other sources of noise are, of course, the same as experienced in all EEG and EMG recording, such as 60 cycle power line pick-up. Standard techniques for eliminating this interference were carefully observed.

To maintain the most favorable signal to noise ratio, the frequency response of the amplifier was restricted to what was found to be an optimum bandwidth. This is indicated in the block diagram of Figure 1 as a filter. The frequency response of the entire system is from 120 cps to 300 cps at the 3db points with a low end slope of 12 db per

¹ 509 Medical-Dental Bldg., Seattle, Wash. This study was conducted at Eastern State Hospital, Medical Lake, Wash.

² Electrical Engineer, Seattle Development Laboratory, Minneapolis Honeywell Regulator Co., Seattle, Washington.

³ Gratitude is expressed to Mr. Jack Kirk for his careful work in processing the many graphs and carrying out the necessary calculations, and to Marga Burgoon, Mae Carey, Mildred Chitwood, Jessie Harris, and Ethel Sanders for their valuable assistance in preparing the subjects for EMGs. Thanks are also expressed to Mr. John Dudley and Mr. Dean Franklin for their assistance in the design and construction of equipment.

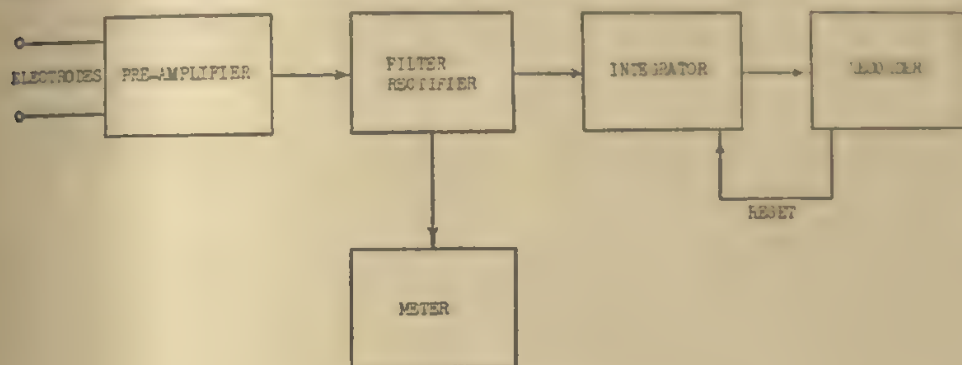


FIG. 1.—Block Diagram of Electromyograph.

octave and a high end slope of 8 db per octave.

In order to drive a d.c. meter the signal is full wave rectified. A common back-bias technique in the meter circuit enables the meter to be set at zero when only the amplifier noise is present, which is done with the electrode leads shorted together. This procedure amounts to a further reduction of the noise level. The noise level with no back-biasing is about $\frac{1}{3}$ microvolt equivalent at the input, and the effective noise level remaining after back-biasing of the meter is about 0.1 microvolt.

An R-C integrator was used with a linear range of more than a minute. The recorder, which is a multiple point printer, samples and records the potential on the integrator, and immediately thereafter trips a reset relay which shorts out the integrating capacitors.

Arbitrary periods of one minute were used as the integration time. Several signal channels may be used with one recorder, and the present work was done with 4 channels, one recording every 15 seconds.

Four amplifier channels and the recorder were mounted in a 19-inch relay rack, except for the 4 read-out meters which were in individual containers to be located in strategic places for monitoring purposes.

METHOD

All subjects lay in the supine position on a bed in a semi-darkened relatively quiet room. They were given the instruction "Rest

and relax as completely as possible and leave your eyes closed."

Continuous electromyographic readings of motor activity were taken simultaneously for 30 minutes from leg, forearm, jaw, and forehead regions. Surface pick-up electrodes were arranged in pairs (since the amplifiers were double-ended) and were placed over antagonistic muscles. Sanborn EKG paste was worked into the skin until the d.c. resistance between electrodes was 2000 ohms or less, and this resistance was measured again at the end of each period to be sure it had not changed. A ground electrode was placed a few inches away from each pair of pick-up electrodes. For the leg one Sanborn EKG electrode (measuring 3.2 cm. by 5.1 cm.) was placed over the anterior tibial muscle and the other over the gastrocnemius of the left leg. For the forearm one EKG electrode was placed over the extensor surface and the other over the flexor surface of the right forearm. To obtain readings from antagonistic muscles acting on the mandible an EKG electrode was placed over the left masseter muscle and a silver electrode measuring 1.8 cm. in diameter was placed in the submental region. Anatomical considerations as well as experimental tests indicated that this pair of electrodes recorded not only from the jaw-closing and jaw-opening muscles but also from some of the muscles controlling the tongue. To obtain readings from the muscles involved in frowning and raising the eyebrows one of the small silver electrodes was placed over the left corrugator muscle and the other in the midline over the

frontalis muscle. With electrodes paired in this fashion, activity in one, the other, or both of a pair of antagonistic muscles would give readings and it was not considered important to know which of the two muscles had been active. At the end of the test period the subjects were questioned to determine various subjective experiences such as whether they slept, whether they were in any pain or discomfort, whether they felt calm and relaxed or were nervous and restless, whether they were fearful, and what they could recall having thought about during the test period.

A group of 21 schizophrenic patients was compared to a group of 10 control subjects. The requirements for the schizophrenic group were that they have a clear-cut unquestionable diagnosis and that they show little or no sign of deterioration. No selections or calculations on the basis of type of schizophrenia were made. The patients varied from 21 years to 49 years of age with a median age of 35 years. The control group was selected from hospital personnel and the only requirement was that each subject should not ever have had a mental illness (psychosis). The control subjects varied from 23 years to 42 years of age with a median age of 33 years. A supplementary sub-

division of the control group into those persons relatively free from functional nervous symptoms and those troubled somewhat with functional complaints was also made. We say "relatively free from functional symptoms" for the one subdivision because it probably would not be possible to find a person completely free from functional complaints at all times.

A sample EMG is given in Figure 2 and will be used to show the method for processing the data contained in each EMG. One was selected in which the various channels do not cross each other because it is easier to see. Each point on the graph is the integrated level of motor activity for a period of one minute, which is approximately the mean value of the motor activity for that minute. This value is expressed in "units of motor activity" although with extra calculations it could have been expressed in microvolts rms. The "unit of motor activity" is an arbitrary unit obtained by dividing the maximum range of the graph paper on the point printer into 100 subdivisions. For those readers who prefer these values expressed in microvolts the approximate conversion figures are 25 units of motor activity equal 1 microvolt rms., 55 units of motor activity equal 2 microvolts, and 85

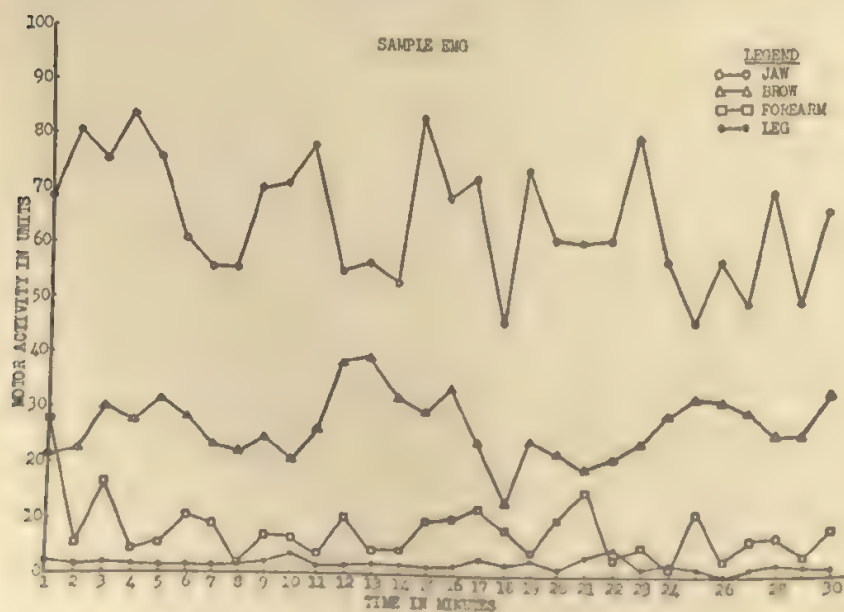


Fig. 2—Sample EMG. One was selected in which the various channels do not cross each other. Each point on the graph is the integrated quantity of motor activity for a period of one minute.

units equal 3 microvolts. The instrument was calibrated both at the start of the period and at the end with a 1 microvolt rms signal at 200 cycles per second and at the end of the period with 2 and 3 microvolt signals as well. From the 30 points printed on the graph for each muscle area, a mean value was calculated. Values going off the top of the graph were assigned a value of 100 units since this is the highest point on the graph. From the mean values for each of the 4 muscle areas a grand mean was calculated. This grand mean is therefore a single number representing the mean quantity of motor activity for the entire 30 minute period.

For both the control group and the patient group, various mean values were calculated, as will be shown in detail in the section on results. The significance of each of these means was determined in accordance with the method described by Fisher (7). For the reader not familiar with the concept of the significance of a mean, this determination basically is answering the question "On the basis of the distribution of samples already obtained, what is the probability that a larger number of samples will give a different mean?". This probability can be calculated accurately and makes it possible to determine when a population sample is large enough to be representative of the population in question. In addition to the significance of means, the significance of the difference between the means of the control and patient groups was also calculated.

RESULTS

Table 1 shows the composition and various mean values for the control group. Table 2 shows corresponding information for the schizophrenic group. Figure 3 shows composite EMG's for the control group and the patient group. Each point on these graphs is the mean of the entire group for that particular minute and the points are plotted minute by minute for a 30 minute period. Table 3 gives a quantitative comparison of the control group and the patient group, and shows the significance of the differences between them. For both the control group and the patient group, the means of the grand means are highly significant ($P = < 0.001$). The differences between the control group and the patient group with respect to the grand mean and the 4 individual muscle area means are highly significant ($P = < 0.001$ for grand mean, forehead, and jaw; $P = < 0.01$ for forearm and leg). It is remarkable to us that these 5 differences are quantitatively so nearly alike. They range from 33.9 to 36.4 units of motor activity. The difference in grand means was 35.0 units, the control group giving 19.9 units of motor activity and the patient group 54.9.

Another point to be emphasized is that the rank order of the 4 muscle areas is the same for both control and patient groups but the patient group is set at a higher level. This can be seen most clearly in Figure 3 which gives composite EMG's for the control group and the patient group.

TABLE 1

MEAN VALUES OF MOTOR ACTIVITY AND SIGNIFICANCE OF THE MEANS FOR THE CONTROL GROUP

Subject	Brow mean (Units)	Jaw mean (Units)	Forearm mean (Units)	Leg mean (Units)	Grand mean (Units)
1. F.L.	17.39	35.47	1.33	0.40	13.6
2. P.A.	25.01	26.56	0.28	2.98	13.9
3. C.B.	43.58	24.17	0.38	2.66	12.7
4. R.P.	11.95	18.48	1.06	6.66	9.5
5. J.F.	11.02	28.61	1.74	3.13	11.4
6. F.W.	40.84	38.12	12.31	6.68	24.3
7. J.H.	35.79	38.37	13.66	6.80	23.6
8. M.H.	33.56	35.22	50.29	12.30	32.8
9. L.S.	15.07	72.99	4.75	10.74	25.4
10. N.B.	47.50	67.45	10.91	2.21	32.0
Group Mean =	26.3	38.5	9.5	5.4	19.9
P Value	< 0.001	< 0.001	< 0.1	< 0.01	< 0.001

TABLE 2

MEAN VALUES OF MOTOR ACTIVITY AND SIGNIFICANCE OF THE MEANS FOR THE SCHIZOPHRENIC PATIENT GROUP

Patient	Brow mean (Units)	Jaw mean (Units)	Forearm mean (Units)	Leg mean (Units)	Grand mean (Units)
1. M.P.	88.02	92.83	49.45	49.56	70.0
2. E.M.	76.34	100.00	55.96	84.74	79.3
3. V.H.	58.15	39.03	5.38	2.18	26.2
4. G.S.	40.30	43.06	13.89	3.17	25.1
5. M.J.	59.87	54.71	3.48	0.06	29.5
6. W.N.	26.19	40.02	12.63	34.19	28.3
7. E.M.	28.49	63.10	99.00	57.79	62.1
8. M.B.	60.78	73.85	98.86	86.67	80.0
9. J.M.	61.91	93.08	94.30	96.95	86.6
10. L.N.	58.20	64.20	8.00	6.60	34.3
11. B.P.	50.40	74.87	54.29	30.26	52.5
12. V.R.	76.99	99.95	67.43	83.29	81.9
13. L.S.	41.86	75.73	3.85	18.68	35.0
14. B.N.	78.73	76.58	8.68	2.38	41.6
15. M.O.	93.30	60.16	10.35	10.36	43.5
16. A.C.	43.58	91.09	15.01	78.71	57.1
17. M.R.	38.33	57.61	29.85	3.01	32.2
18. M.M.	82.74	96.96	97.58	67.52	86.2
19. D.T.	53.78	100.00	59.06	13.00	56.5
20. R.R.	47.46	78.48	97.67	100.00	80.9
21. E.Z.	99.29	98.10	56.56	4.89	64.7
Group Mean =	60.2	74.9	44.8	39.7	54.9
P Value =	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001

Only 5 grand means for the patient group overlap the range of the control group. They lie in the upper portion of the control range and none of them reach down to the mean value for the control group.

An interesting sidelight is the result obtained when the control group, which is composed of hospital personnel who have never had a mental illness, is broken down into two subgroups. One subgroup is made up of those persons relatively free from functional symptoms of any kind and the other

subgroup is composed of those who are troubled somewhat with functional complaints. The former included 6 subjects and gave a grand mean of 15.5 units of motor activity. The latter was composed of 4 subjects and gave a grand mean of 26.5 units of motor activity. Even though there are only 6 subjects in one subgroup and 4 in the other, the difference between their means is significant ($P = < 0.05$).

DISCUSSION

The activity we are recording in these experiments is most likely accompanied by increased activity in efferent neurons of the motor cortex and/or premotor cortex. Whether this hyperactivity of pyramidal cells plays an etiological role in the development of schizophrenia or is a consequence of the disorder is a very important question. Although we often think of motor activity in mental illness as being secondary to psychic processes we must not discard the reverse possibility prematurely. One reason for caution comes from research indicating the importance of motor states in the maintenance

TABLE 3

COMPARISON OF CONTROL GROUP AND SCHIZOPHRENIC PATIENT GROUP SHOWING THE SIGNIFICANCE OF THE DIFFERENCES

	Control group (Units)	Schizophrenic patient group (Units)	Difference (Units)	
Brow mean ...	26.3	60.2	33.9	$P = < 0.001$
Jaw mean	38.5	74.9	36.4	$P = < 0.001$
Forearm mean..	9.5	44.8	35.3	$P = < 0.01$
Leg mean	5.4	39.7	34.3	$P = < 0.01$
Grand mean =	19.9	54.9	35.0	$P = < 0.001$

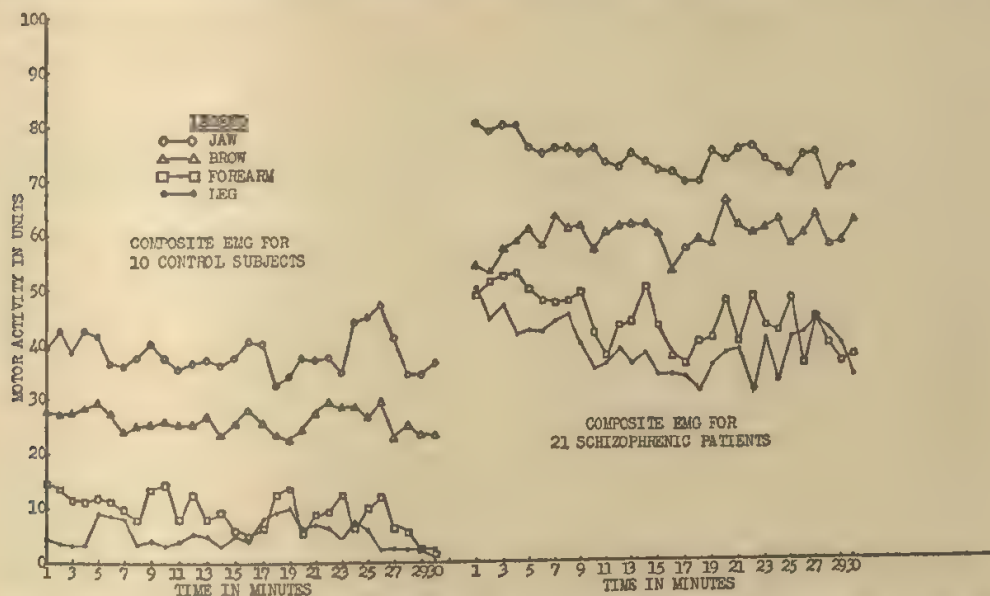


FIG. 3.—Composite EMG's for control group and patient group. Each point is the mean of the entire group for that particular minute.

nance of consciousness and the waking state (19, 28).

Hyperactivity of pyramidal cells can have widespread influence on the functioning of the cerebral cortex as well as subcortical structures. This influence would be exerted through the many collateral fibers given off at various levels along the descending axones and through afferent flow from proprioceptors activated when muscles contract. Many other neurons would thus become either hyperexcited or excessively inhibited depending on the nature of their connections with the hyperactive pyramidal cells.

There are indications from numerous sources that the act of thinking itself is in part a motor act involving pyramidal cells (1, 12, 26, 27, 30, 32, 33), and that feelings and emotion likewise are intimately tied up with motor states (3, 12). If this is the case it would not be hard to understand how hyperactivity of this motor system might lead to disturbances of thinking and of emotion. The point to be emphasized is that this possibility must be kept in mind and we must not jump to conclusions hastily.

This state of hyperactivity of the motor portion of the nervous system, whether localized or generalized, intermittent or con-

tinuous, static or phasic, overt or invisible, has been referred to in the literature as neuromuscular hypertension and also as neuromuscular hyperkinesis (12, 15, 16). Perhaps the expression "hyperponesis" would be even more descriptive. This word comes from the Greek "hyper" meaning excessive, and "ponesis" meaning exertion.

There is growing interest in this condition and in determining its exact position in the neurophysiology of functional disorders. More attention has been given to its relation to the neuroses and psychosomatic disorders than to its relation to schizophrenia. Malmö, Shagass, and Davis (23, 24, 29), consider excessive muscular tension to be probably of considerable importance in the production of symptoms in patients with functional disorders. They have reported instances in which symptoms of a "tired feeling" in the head and head discomfort were preceded by a sustained burst of high-level electromyographic activity in the frontalis muscle or in neck muscles. Wolf (34) found sustained contraction of the diaphragm to underlie a common type of functional dyspnea and precordial pain. He found it could also produce occlusion of the lower end of the esophagus and could do this before the con-

tractile state of the diaphragm was sufficient to produce respiratory difficulty. Kaufman (17) refers to a similar mechanism in discussing the syndrome of spontaneous hypoventilation. Holmes and Wolff (11) refer to a pattern of motor behavior which they call the "on guard" pattern, and state that when it is utilized as a way of life it may place an intolerable burden on the individual's emotional and physical equipment. Haugen (10) referred to this same motor pattern calling it a bracing reaction and expressed the view that without this bracing reaction no neurosis can develop and unless this bracing reaction can be permanently decreased or eliminated the patient remains vulnerable to an exacerbation of his illness. There are many other such reports too numerous to mention (4, 5, 6, 20, 21, 35). Jacobson has proposed neuromuscular hypertension as a fundamental disorder underlying some of the psychoneuroses and certain psychosomatic disorders and he considers this neuromuscular hypertension to be so fundamental that unless it is overcome the patient tends to remain ill, no matter what the therapy (12, 15, 16). He has evolved methods of therapy which attack directly the exaggerated motor state by a re-educative process.

Studies of motor activity in schizophrenia reported to date have dealt with overt movement or the high levels of electromyographic activity present while patients are carrying out some prescribed activity or are being subjected to a stress situation (22, 24). It is important to emphasize the difference between these studies and the ones reported here. In our studies the motor activity measured was that present while the subjects were lying at rest and was for the most part invisible to the naked eye. Equipment capable of measuring reliably small differences at these low levels of activity had to be constructed before these measurements could be made.

Nevertheless our findings complement those of Malmo and coworkers (22, 24). Whereas their schizophrenic patients responded to certain types of stress with excessive motor activity, our patients showed excessive motor activity while at rest.

SUMMARY

1. The value of studying motor activity in mental illness should not be overlooked. Motor activity within the central nervous system is intimately tied up with sensation, emotion, and thinking. An understanding of the neurophysiology of any one of these, as well as their deviations in illness, must include a description of the motor component.

2. Multi-channel electromyographic measurements on 21 schizophrenic patients and 10 control subjects are here reported. An electromyograph giving both integrated and instantaneous readings and capable of measuring minute amounts of motor activity was employed. Residual motor activity was recorded while the subjects endeavored to relax as completely as possible in the supine position. This residual motor activity is for the most part invisible to the naked eye.

Records were taken simultaneously from 4 muscle areas, namely forehead, jaw, forearm, and leg, for 30-minute periods. The patients exhibit higher levels of motor activity in all 4 muscle areas and the differences between these and the values for the control group are highly significant ($P = < 0.001$ for forehead and jaw, and $P = < 0.01$ for forearm and leg). Quantitatively these differences are remarkably similar for each muscle area. The grand mean for the patient group is 54.9 units of motor activity and for the control group 19.9 units.

3. This exaggerated motor activity is most likely accompanied by increased activity in efferent neurons of the motor cortex and/or premotor cortex. Such increased pyramidal cell activity could have widespread influence on the functioning of the cerebral cortex, as well as subcortical structures, through the agency of the many collateral fibers given off by these neurons. Since there is evidence that both thinking and emotion have motor components, it is reasonable that hyperactivity in the motor system might lead to disturbances of thinking and emotion. The possibility of motor system hyperactivity playing an etiological role of some type in the onset of schizophrenia should be kept in mind.

4. The term "hyperponesis" is suggested to refer to exaggerated activity within the motor portion of the central nervous system. This exaggerated activity may be localized to a portion of the motor system or generalized to include the whole motor system, it may be intermittent or continuous, static or phasic, overt or invisible.

BIBLIOGRAPHY

1. Allers, R., and Scheminzy, F.: *Pflug. Arch. f. Physiologie*, **212**: 169, 1926.
2. Bender, Laurretta: *Psychopathology of children with organic brain disorders*. Springfield, Ill.: Charles C Thomas, 1956.
3. Bull, Nina: *The attitude theory of emotion*. New York: Nerv. & Ment. Dis. Monographs, 1951.
4. Dixon, H. H., Dickel, H. A., Coen, R. A., and Haugen, G. B.: *Western J. Surg., Obs., & Gyn.*, **58**: 667, 1950.
5. Dixon, H. H., Dickel, H. A., Shanklin, J. G., Peterson, R. D., and West, E. S.: *Western J. Surg., Obs., & Gyn.*, **62**: 338, 1954.
6. Dixon, H. H., Peterson, R. D., Dickel, H. A., Jones, C. H., and West, E. S.: *Western J. Surg., Obs., & Gyn.*, **60**: 327, 1952.
7. Fisher, R. A.: *Statistical methods for research workers*. New York: Hafner Publishing Co. Inc., 1954.
8. Gould, L. N.: *J. Nerv. & Ment. Dis.*, **109**: 418, 1949.
9. Gould, L. N.: *Am. J. Psychiat.*, **107**: 110, 1950.
10. Haugen, G. B.: *A neurophysiologic theory of the neuroses*. Paper presented at North Pacific Society of Neurology & Psychiatry, April, 1955.
11. Holmes, T. H., and Wolff, H. G.: *Psychosom. Med.*, **14**: 18, 1952.
12. Jacobson, Edmund: *Progressive relaxation*. 2nd Ed., Chicago, Ill.: Univ. of Chicago Press, 1938.
13. Jacobson, Edmund: *Rev. Scientific Instruments*, **11**: 415, 1940.
14. Jacobson, Edmund: *Am. J. Psychiat.*, **97**: 513, 1940.
15. Jacobson, Edmund: *Am. J. Psychiat.*, **98**: 219, 1941.
16. Jacobson, Edmund: *Am. J. Psychol.*, **68**: 549, 1955.
17. Kaufman, William: *Mississippi Valley Med. J.*, **73**: 1951.
18. King, H. E.: *Psychomotor aspects of mental disease*. Cambridge, Mass.: Harvard University Press, 1954.
19. Kleitman, Nathaniel: *Sleep and wakefulness*. Chicago, Ill.: Univ. of Chicago Press, 1939.
20. Kretschmer, Ernst: *Psychotherapeutische Studien*. Stuttgart, Georg Thieme Verlag., 1949.
21. Lundervold, Arne: *J. Nerv. & Ment. Dis.*, **115**: 512, 1952.
22. Malmö, R. B., and Shagass, C.: *Psychosom. Med.*, **11**: 9, 1949.
23. Malmö, R. B., Shagass, C., and Davis, F. H.: *Res. Publ. Ass. Nerv. & Ment. Dis.*, **29**: 231, 1950.
24. Malmö, R. B., Shagass, C., and Davis, J. F.: *J. Clin. & Exper. Psychopath.*, **12**: 45, 1951.
25. Max, L. W.: *J. Gen. Psychol.*, **11**: 112, 1934.
26. Max, L. W.: *J. Comp. Psychol.*, **19**: 469, 1935.
27. Max, L. W.: *J. Comp. Psychol.*, **24**: 301, 1937.
28. Roger, A., Rossi, G. F., and Zirondoli, A.: *EEG & Clin. Neurophysiol.*, **8**: 1, 1956.
29. Shagass, C., and Malmö, R. B.: *Psychosom. Med.*, **16**: 295, 1954.
30. Shaw, W. A.: *Arch. Psychol.*, **35**: 5, 1940.
31. Sperry, R. W.: *Am. Scientist*, **40**: 291, 1952.
32. Totten, E.: *Compar. Psychol. Monographs*, **11**: No. 3, Serial No. 53, 1935.
33. Vinacke, W. E.: *The Psychology of Thinking*. New York: McGraw-Hill Book Company, Inc., 1952.
34. Wolf, S.: *J. Clin. Investig.*, **26**: 1201, 1947.
35. Wolpe, Joseph: *Arch. Neurol. & Psychiat.*, **72**: 205, 1954.

A PSYCHOSOMATIC STUDY OF ALLERGIC AND EMOTIONAL FACTORS IN CHILDREN WITH ASTHMA^{1, 2}

ROBERT T. LONG, M.D., JOHN H. LAMONT, M.D., BABETTE WHIPPLE, Ph.D.,
LOUISE BANDLER, M.S.S., GASTON E. BLOM, M.D., LEO BURGIN, M.D., AND
LUCIE JESSNER, M.D., SENIOR CONSULTANT³

We would like to report some findings from a collaborative study on allergic and emotional factors in children with asthma. The point of departure for this investigation is a frequently recorded observation(1, 10, 14, 17), namely that children with perennial, intractable asthma are often symptomatically relieved by admission to a hospital, even though maintained on the same medication in the hospital as they had received at home. Equally often they relapse upon return home on the same medication.

Various explanations have been offered for this observation. Stated in the extreme, they are:

1. Allergists assume that the asthma is perpetuated by continuous exposure to an allergen, *e.g.*, house dust(17).

2. Psychiatrists assume that there is excessive interpersonal tension within the home, especially between the mother and the asthmatic child(1, 10, 14).

In both of these cases, hospitalization removes the irritant; be it allergenic or emotional.

3. Psychosomatic explanation regards the asthmatic symptoms as the result of a confluence of numerous factors—environmental, emotional, and allergic.

METHOD

Our study is in two parts. First, to test whether sensitivity to house dust is the only necessary factor for production of asthma we proceeded as follows:

1. Nineteen children with perennial, intractable asthma were hospitalized, 14 dur-

¹ Read at the 113th annual meeting of The American Psychiatric Association, Chicago, Ill., May 13-17, 1957.

² This investigation was supported in part by a research grant (#M-819 and supplements) from the National Institute of Mental Health, U. S. Public Health Service, and in part by the Harvard Medical School.

³ Child Psychiatry Unit, Massachusetts General Hospital, Boston 14, Mass.

ing an acute episode. The age range was limited to children from 6 to 12 years of age.

2. Allergic data collected included family history of allergy, past allergic history, and skin sensitivity to allergens.

3. The research group was divided into two groups on the basis of sensitivity to house dust.

4. When symptom-free, their hospital room was sprayed with dust collected by vacuum cleaning from their own home. The patient was then placed in the room for a period of from 4 to 12 hours, usually overnight. The dust was kept circulating with a fan. Evidence of asthmatic symptoms, wheezing, coughing, or other changes in respiration or physical discomfort were charted.

RESULTS

Part I

Figure I: In this figure is a further characterization of the research group and results of exposure to house dust during hospitalization.

In column 3, note that the sex distribution is 9 girls to 10 boys. In column 4 is charted the age at onset of asthma. This varied from 6 months to 9 years, with an average age of onset at 3½ years. In column 5 we have charted the ordinal position. There are 2 only children and 9 first born.

In the next column on allergic family history, two crosses means a history of allergy in both paternal and maternal lines. One cross means that only one line has a positive allergic history. Fourteen of our cases have a family history of allergy, of which 8 have such histories on both sides of the family.

In the column on other allergic symptoms, note that eczema occurs in 11 of the 19 cases.

Next, the severity of asthma was defined

MGH UNIT #	NAME	SEX	AGE REFERRAL	AGE ONSET	ONSET AGE 1-10	SKIN TESTS	ALLERGY	OTHER ALLERGIC SYMPTOMS	SEVERITY ASTHMA	IMPROVEMENT IN HOSPITAL	SKIN TEST H O	RESULT H O EXPOSURE		
919947	S.W.	♀	6½	1½	+	+	0	+		+	0			
912949	N.T.	♀	7	3	½	++	ECZ.	+		+	0	0		
924253	C.F.	♀	8	4	½	++	0	0		+	+	0		
638124	J.W.	♀	9	1	½	0	ECZ	+		+	+	0		
781637	C.C.	♀	9	4	2+	++	ECZ	+		+	0	0		
881286	P.H.	♀	9½	2½	½	+	0	0		+	+	0		
562740	D.W.	♀	9½	2½	2½	+	ECZ.	+		+	+	0		
908382	E.O.	♀	9½	9	2/5	+	0	+		+	+	0		
918846	J.W.	♀	12	6	½	++	0	+		+	+	0		
866870	J.C.	♂	8	½	5/6	+	0	0		+	+	0		
965029	D.F.	♂	9	3	3/3	+	ECZ.	+		+	+	0		
808608	E.K.	♂	9	4	½	0	ECZ.	0		+	+	0		
791873	T.M.	♂	9	1½	2/4	++	ECZ	+		+	+	0		
580585	R.T.	♂	9½	5	½	0	0	0		+	+	0		
878452	R.W.	♂	9½	5	½	++	ECZ	+		+	+	0		
746307	M.B.	♂	10	3	2/2	++	ECZ	+		+	0	0		
609246	R.P.	♂	10½	1	3/3	0	ECZ	+		+	0	0		
866762	R.E.	♂	11½	6	½	++	0	+		+	+	0		
773948	W.W.	♂	12	6	½	0	ECZ	+		+	+	0		

FIG. 1.

arbitrarily by the presence of x-ray evidence of pulmonary emphysematous changes. Fourteen of the 19 cases had such changes.

In column 9, we have charted improvement on hospitalization. This is misleading. Five of the 19 cases were hospitalized for this specific study and did not enter in an acute asthmatic attack, although they had chronic symptoms. The other 14 cases were hospitalized in an acute attack, and although maintained on essentially the same medication as at home, the acute episode subsided within 24-48 hours.

In the following column, we record results of skin sensitivities to house dust.

There are 14 positive reactors, and 5 negative reactors.

In the last column are recorded the results of exposure to their own house dust. In the first case, the patient's nutritional status was too precarious to allow the minimal risk of exposure to her own house dust. In the remaining 18 cases there was no evidence of respiratory changes by stethoscopic examination although their rooms were sprayed heavily with dust far exceeding any concentration that could have been normally circulating in their own homes.

We were surprised at these results, as we had anticipated that in at least some cases we

would precipitate asthma. As a further step, one child, who lived above a bakery and who was markedly sensitive to wheat, had flour sprayed in heavy concentration into her room while in the hospital. There was no evidence of respiratory changes. Another step was to place at the disposal of the parents an electronic dust precipitator which clears the air of the finest particulate matter at a 99% level. In two cases the use of this precipitator in the home did not relieve asthmatic episodes with the child at home.

DISCUSSION

A crucial question arises: is house dust an allergen? About this we can only say that it is common practice in allergy clinics to assume that it is a true allergen, to skin test people for sensitivity to it, and if indicated to follow through with desensitizing procedures. From our results, we cannot say that house dust has no allergenic properties, but it is clear that it is not the only necessary factor to produce asthma.

We emphasize that our cases are highly selected by our initial criteria. They were perennial, intractable asthmatics and with one exception were exposed to only one allergen; *i.e.*, house dust. Our findings cannot be generalized to true pollen asthma. We do not doubt the essential nature of an allergic predisposition in these children. However, we feel these findings point to a more complex etiology of asthmatic episodes. These results clearly indicate that exposure to house dust is not a sufficient cause for the production of asthma.

METHOD

Part II

In studies by French and Alexander(8), and Jessner, *et al.*(11), the central conflicts in asthmatic children and their mothers are described. Briefly summarized, these clinical impressions were:

1. Child's need to be close to mother. The asthmatic child expresses a special need for closeness to his mother. The need, or strength of the need, is not so specific for asthmatics as is the form in which this need is expressed. The needs are symbolized by:

- a. symbiotic fantasies of union with mother;
- b. fantasies of being one of twins;
- c. claustral fantasies.

2. Mother's need for closeness to the asthmatic child. The mothers of asthmatic children often revealed the unconscious wish to maintain the child in an infantile dependent attachment.

3. Source of this need in the mother. Mothers of asthmatic children have active unresolved conflicts stemming from early key figures in their childhood.

Our aim here was to explore the relationship of these factors to the child's asthma and to his improvement through hospitalization. We proceeded as follows:

1. The children were interviewed by a child psychiatrist while in the hospital and in weekly follow-up appointments after discharge from the hospital, if the parents' permission and cooperation was forthcoming. From this material, the present psychological status and essential conflicts were formulated.

2. The mother was similarly seen by the social worker to evaluate her current psychological status, her conflicts in relation to the child, and to obtain a detailed developmental history.

3. The following psychological tests were given to the child while in the hospital: Draw-A-Person, Story Completion Test, TAT, The Blacky Pictures, brief IQ test. We compared the protocols with those obtained from hospitalized non-psychosomatic patients. These non-psychosomatic cases were matched with the asthma cases for sex, age, and social economic status.

RESULTS

Part II

Our goal in administering the psychological tests was to investigate the possibility of using a fairly standard psychological battery to test clinical impressions about the need for closeness and the fear of closeness to mother in children with asthma. We felt this would help answer the question of why there is improvement with hospitalization. We hoped to interpret the psychological data by means of scoring procedures that were both objective and pertinent to the complex

dynamic relationships which Alexander and French(6), Margaret Gerard(9) and other clinicians have described in asthmatic patients.

Our first step was to formulate as testable hypotheses those clinical insights gathered from the literature and our own clinical experience which we considered basic to an understanding of asthma. The result was 12 statements or hypotheses about the nature of the difference between a group of asthmatic children and a matched sample of hospitalized, nonpsychosomatic children.

Next we constructed appropriate scoring procedures with which to test the hypotheses whenever we could not find a suitable mode of analysis. As the research progressed, we had to revise some of the scoring rules. This amounted in essence to revising our testing instrument at the same time as using it with research cases. Our results are therefore contaminated. This report is only to illustrate a few of the trends which give promise of significant results when applied to a new sample.

To clarify the methodological approach followed here, let us take a closer look at one hypothesis, at the scoring categories used to measure the data pertinent to it, and at the results obtained.

The second hypothesis, the one we shall examine, attempts to specify in greater detail the nature of the closeness to his mother which the asthmatic patient seeks. There are many kinds of pathologically close bonds between a child and his mother, many forms of dependency. We accept Alexander's concept of asthmatic dependency versus oral dependency. This belief we express in the second hypothesis as follows: "Children with asthma, as compared with other children of the same age level, have a stronger wish to return to the state of closeness to mother that existed before birth." This hypothesis explicitly asserts that children with asthma have in common one particular type of close tie to their mother. Implicitly it differentiates the wish for intra-uterine closeness from other regressive wishes, such as the wish to be fed, the wish to consume and the wish to retain, and states that the latter are not common to all asthmatic children. Individuals have many types of wishes

and a given wish usually has multiple meanings. But if this hypothesis is correct, we should be able to detect group differences between asthmatic children and controls with respect to this one particular form of regressive wish, but not necessarily with respect to the others.

One of the ways we tested the hypothesis involved counting the number of claustral fantasies in the protocols. We specify very precisely what is to be scored as a claustral symbol both in the drawings and in the thematic projective tests. Briefly we follow H. A. Murray(13 A) and score as claustral all places that are described as small, dark, secluded, safe, warm, private, or concealing. We include islands, enclosed valleys and certain versions of paradise and any space in which one can float unsupported, such as on clouds or in water. Death, when it is seen as a protection to which one escapes from conflict or when it is regarded as providing an opportunity for rebirth, is scored.

The TAT, to take only one of our instruments, yielded impressive differences. We counted individual mentions of claustral symbols and in addition the number of stories whose major theme could be classified as claustral; *i.e.*, as one in which the search for a claustral object occupies a central role in the plot of the story or in which the story itself has to do with birth, rebirth or being an orphan. Richard's TAT protocol contains 14 claustral symbols. Two of his 11 stories have main themes that are claustral. The control patient matching Richard has no claustral symbols in his TAT protocol and none of the major themes in his stories are claustral themes. This comparison is typical. Most of the asthma patients had many more claustral symbols than did their controls. The group as a whole had roughly three times as many. Ten out of 16 asthma patients had one or more claustral major themes but only 3 of the 15 control patients did. The relatively unstructured TAT seems to tap claustral fantasies more consistently than do the more structured tests.

In addition to creating claustral fantasies there are other ways in which a person can exhibit the existence of strong regressive dependent wishes. Our particular battery of tests provides no measure of overt be-

havior. We felt we could approach the problem indirectly, however, by studying the effects of dependency needs on fantasies relating to achievement. If the hypothesis were correct, asthmatic patients would tend to tell stories in which activity is undertaken in order to effect a reunion with someone or to please someone. Achievement needs would be subsidiary to dependent needs. Control patients would have a higher proportion of stories in which the goal of achievement is something not involving dependency, such as self satisfaction or power. Accordingly we devised a ratio in which the contrast is between what we call "dependent activity" and "constructive activity." We feel that this ratio taps claustral regressive wishes as differentiated, for example, from oral dependency wishes. The scoring is straight forward.

Richard had 15 achievement episodes in his TAT protocol—a much higher number than any other patient. His control had only 5. But these absolute numbers are unimportant. When we examine the ratio of dependent: constructive activity for these two boys we find that it is 3:2 for Richard and 0:5 for his control.

The ratio between "dependent activity" and "constructive activity" is roughly 2:1 for all of the asthmatics and 1:9 for all of the control patients. Achievement episodes which are scored as "dependent activity" rarely involve attaining oral gratification.

This brief account of some of the measuring instruments we used to test one of our 12 hypotheses and of the results obtained with our sample gives you some idea of the way in which we handled the psychological data. It also clarifies the reason for our being able to present results in a meaningful fashion only after describing the scoring categories. We devised a number of ratios and objective measures which we regard as powerful tools of data analysis.

Alexander has observed that it is the fear of separation from mother and not actual separation which bothers asthmatic patients. There is also a fear of being too close to mother, so separation can act to reduce anxiety. One measuring device pertinent to hypothesis VI, which states that asthmatic children perceive the realization of their

wish to be close to mother as dangerous, is the illness-home: illness-away ratio. More of our asthmatic patients describe the hero in the projective stories as ill when he is at home or as improving when away from home. The ratio is roughly 10:1. More of the control patients, on the other hand, describe the hero as ill when away from home and well when at home. For them, the ratio is roughly 5:8. Richard describes the hero as ill in three of his TAT stories. Each time the *illness* occurs while the hero is at home and twice there is improvement when the hero visits a friend. Richard's ratio is 3:0. That of his control is 3:2. Twice in the latter's stories it is clear that *improvement* occurs at home. The other three stories, being ambiguous as to the locale, we have scored conservatively as "illness at home."

Another factor which could operate to reduce anxiety during the patients' hospitalization and therefore bring about an improvement in their asthma is the use of effective defense mechanisms. One such mechanism is suggested in the observation that patients with asthma have a special capacity to elaborate and derive satisfaction from reunion fantasies when separated from the loved one. We stated this in hypothesis form, and devised a ratio to permit testing it. This measuring tool can be applied only when there is a contrast in the projective material between a pleasant fantasy and the reality which follows upon it. Our findings are positive. The asthma patients expressed disappointment with reality in 22 out of 28 contrasts; whereas, the control patients did so in only 5 out of 30 contrasts. They were more apt to consider reality to be as good as or better than the fantasy.

To sum up these findings and present them within a clinical context we present the following case.

Case Illustration.—Richard, a 9½ year old boy, was admitted to the Massachusetts General Hospital because of persistent asthma of one month's duration. He was small for his age, weighed only 43 pounds and looked chronically ill. There were moderate emphysematous changes in his chest, with coarse wheezes throughout both lung fields. Within 12 hours, he improved markedly without specific therapy other than an aminophylline suppository. Although he was sensitive to house dust, when house dust was sprayed into his room, he showed

no respiratory change. Within a week after discharge his asthma returned.

Figure II: The pertinent medical and social history of Richard is outlined on this life chart. Reading from left to right there is the chronology in years, starting with March, 1946, Richard's birthday. Next is his age, then pertinent medical history,

period of eczema, onset and course of asthma, and pertinent social history.

Richard is the oldest of 3 children. He was a full term normal delivery with a birth weight of 7 lbs. 3 oz. Because of her feeling of disgust regarding nursing, mother placed patient on the bottle in spite of the fact that she had plenty of milk. The initial struggle between mother and child over feeding was reinforced at 6 months

LIFE CHART R.W.					
YEAR	AGE	MEDICAL HIST.	ECZ.	ASTHMA	SOCIAL HISTORY.
MARCH 1946	0	F.T.S.D B.W. 7 ⁵ Bottle Fed. MANY FORMULA CHANGES			MO. DISAPPOINTED- WANTED GIRL DISGUST \bar{c} NURSING
1947	1	WALKED TALKED			FAMILY MOVED FROM NYC \rightarrow BOSTON CLOSER TO M.G.M.
1948	2	TOILET TRAINED			
1949	3	WEANED WHOOPIING COUGH			
1950	4	MEASLES			
1951	5	MAY - T and A JUNE ASTHMA DIAGNOSED			MOTHER PREGNANT
1952	6				BROTHER BORN OCT. 1952
1953	7	ASTHMA 1-2X/mo WINTER > SUMMER			OPERATION ON BRO. PYLORIC STENOSIS BROTHER DEVELOPS ASTHMA
1954	8	DEC. FIRST M.G.M. CONTACT			MOVED TO SUBURB OCT. 1954
1955	9	ASTHMA WORSE SEPT 15-24 } HOSP. (M.G.M.) } NOV.-DEC ON } META CORTONEJ			MOTHER PREGNANT AUG. - THREATENED MISCARRIAGE
1956	10			?	SISTER BORN JAN. 1956

FIG. 2.

when Richard developed eczema. Many shifts in formula led mother to feel he was starving to death. Mother gave him the bottle whenever he wanted it until he was 3, saying that he was a chronic poor eater. Eczema cleared at 2 years.

At 5 years, patient developed asthma one month after a T&A and during his first year at school. Mother was also pregnant at the time with patient's brother. In spite of the fact that brother developed asthma at 7 months and has had periodic attacks, mother has never expressed anxiety about his asthma. Richard's asthmatic attacks have continued at the rate of once or twice a month, with attacks more frequent around the time of the opening of school and in the winter.

In December, 1954, Richard was first seen at the Massachusetts General Hospital Out Patient Clinics where he was found to be sensitive to ragweed and house dust. In May of 1955, mother became pregnant again and in August Richard commenced wheezing continuously and was admitted to the Massachusetts General Hospital on September 16 for one week.

Figure III: This shows the family constellation with some pertinent information on the background of father and mother.

Richard's mother was the third of 5 girls. During her childhood and adolescence she felt that she was never able to communicate any of her needs to her mother. Her father, of whom she was fond, was quiet and frequently absent on his fishing schooner. She experienced loneliness and isolation

which was in part mitigated by her relationship to her oldest sister. Following the birth of her youngest sister, who was 9 years younger, she developed the fantasy that her mother feared and hated her pregnancies. Currently she felt that her mother hated her daughters to become pregnant. Her fantasies about pregnancy developed out of witnessing her mother's severe bleeding during the pregnancy with her youngest sister. Her mother and sister were not expected to live. Her ideas of bleeding and fear of either pain or death in connection with pregnancies were strongly reinforced by a T&A at the age of 9. Into this experience which occurred at the time of her mother's pregnancy she wove her ideas of danger and death into fantasies about dangers of pregnancy.

Because she devaluated her husband, she did not find love and companionship in her marriage. Her husband had great early deprivation with loss of his father at the age of 11. At 14, he helped support his mother and only sister. At 17, he entered the Coast Guard and at 18 he married mother within two months after his mother had re-married.

In each pregnancy, mother wished for a daughter. At patient's birth, she was disappointed and later when he developed eczema considered him ugly. On the other hand, she stated he made up her entire world and she his. Consequently neither, "she nor he had any need for father."

In the current situation this close bond continues—"Richard knows what I want, what I feel, and what I need." He helps with the housework and worries about her health.

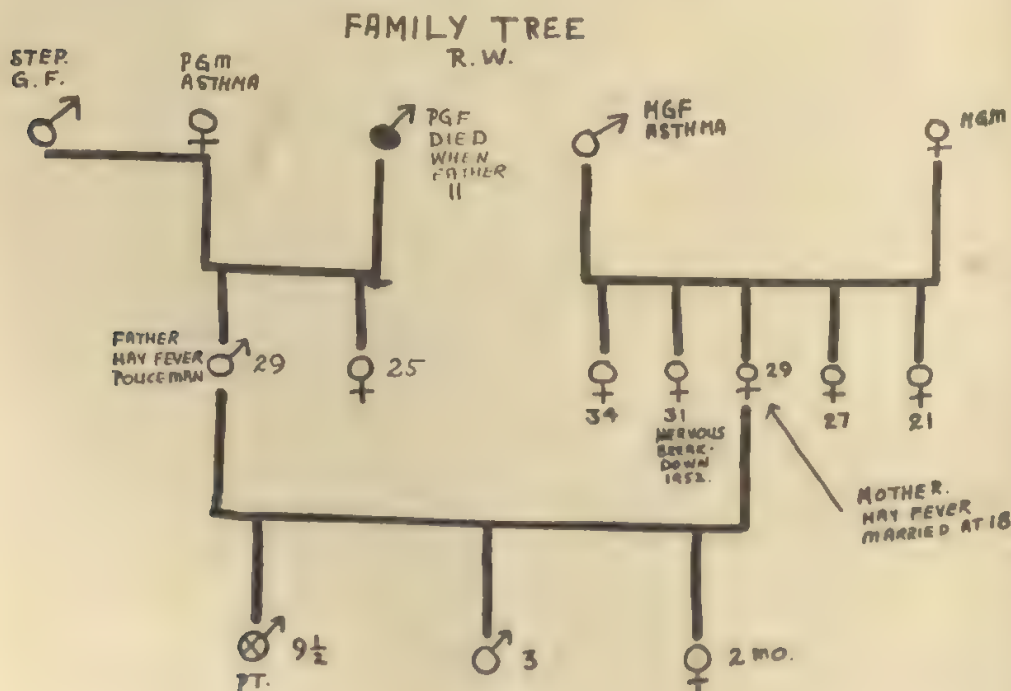


Fig. 3.

At the time of patient's admission to the hospital, mother was 4 months pregnant. Mother's delivery of patient had been uneventful. Her second delivery, however, had been a precipitant one in her obstetrician's office. This experience blended with her previous fears of dangers of pregnancy had colored her attitude towards her third pregnancy. When threatened with a miscarriage, one month before Richard's admission, mother denied her own anxiety and became increasingly concerned about patient's asthma. Patient actually had had a good spring and summer and only commenced to wheeze at the time of mother's bleeding. Mother's anxiety about patient choking to death or possibly dying came to a climax the night of patient's admission to the hospital. At 3 A.M. that night she forced her pediatrician to hospitalize patient.

During Richard's hospitalization, mother stated that she experienced great relief as she felt the emergency had been taken care of. The doctors and nurses would see that nothing happened to patient. She appeared free of anxiety and free of any ambivalence towards Richard. She was sympathetic to all his needs and spent every afternoon with him. It was as if each hospital visit was a reunion with patient who appeared to respond with a similar feeling of being united with a giving mother. She spoke of her relief in knowing that he would be able to obtain whatever he wanted to eat in the hospital. In speaking of food, mother stated she herself was eating better and would gain her usual 43 pounds. (Mother's gain in weight during pregnancy is equivalent to patient's current weight.) She also spoke of not having to become impatient with his physical appearance. Without any apparent insight, mother described patient as "looking like an old woman who walked as if he were carrying a heavy load, who breathed with difficulty and only wanted rest." During this latter description mother's own breathing was labored.

Immediately after patient's return home mother's anxiety was manifested again and she complained of the hospital's failure to cure him. She spoke in detail about the recurrence of all his symptoms. Her anxiety mounted and the patient responded with wheezing. Her anxiety diminished only when the social worker dealt with her anxiety about pregnancy directly.

In talks with the psychiatrist, Richard reflected his concerns about his feelings toward his father and mother. While in the hospital, he predominantly was concerned about his father. He idealized him and wanted to be like him. He told stories, real or fancied, of his father's heroism while in the Coast Guard, of how his father had saved his ship on several occasions. He told of his father's early life and of the struggle father had had financially, almost in Horatio Alger terms. Richard was quite sad and wistful in his longing for a closer relationship to his father whom he admired very much. There were no regressive wishes or fantasies expressed.

After he left the hospital, his asthma promptly returned and his concerns abruptly shifted to mat-

ters dealing with his mother's pregnancy. He was very anxious and curious about sexual matters, expressing this in a symbolic manner. For example, he wondered why he had trouble learning to multiply in school. The therapist wondered what confused him about multiplying. He became anxious and didn't want to talk about this. After a silence, he said there were some words at school he had trouble with—words like fungus. He thought it was like the plant, mistletoe, which grows on trees and lives off the sap of the tree. Should there be too much mistletoe it would take all the food of the tree and the tree would die. Here we think he expresses directly his concern and anxiety over his mother's pregnancy, but more important, this expresses Richard's regressive wish for closeness to his mother.

Following this, Richard told a story of a scientist who changed a lion into a person, but the scientist died before he could complete the job. The only traces left of the lion are the long hair, long nails, hair on the arms, and protruding teeth. He tells how this half animal—half human was probably really half woman because lions are supposed to have such a rough tongue, like sandpaper, that should they lick your skin it would peel right off. They demolish meat by licking it—"Peel the skin right off."

In this fantasy, we feel Richard distorts the image of mother for a specific purpose. He first expresses regressive wishes for closeness to the mother through the fungus-mistletoe fantasy. This wish is felt as dangerous to the ego. He then distorts his feeling perception of the maternal object in order to serve the defensive purpose of maintaining his equilibrium and counteracting the regressive wish.

We see in this case a mother with overwhelming anxiety. Her pregnancy mobilized latent conflicts from her early childhood. She denied her own anxiety by displacing fears for her own safety onto the patient. Richard expressed his feelings toward mother through the mistletoe and lioness fantasies. Hospitalization places both the patient and mother in a situation where reality rather than fantasy is dominant. As Alexander has said, the threat of separation is more difficult for asthmatics than is actual separation itself. Actual separation reduces fantasy and substitutes reality.

To summarize the points we wish to emphasize in this case:

1. There is a too close ambivalent tie between the mother and child. Mother and patient's needs were so closely bound together,

it was not always possible to distinguish between them.

2. The mother showed an unresolved over-dependence on her own mother and unresolved conflicts in relation to her mother's pregnancy with her sister.

3. Current and overwhelming anxiety was aroused in the mother by her pregnancy.

4. She displaced her anxiety onto the patient's illness and tried to deal with this anxiety by hospitalizing patient.

5. She utilized the child's illness to reinforce her own defensive manoeuvres.

6. The patient expressed his regressive wishes towards his mother through the symbol of the fungus-mistletoe.

7. This regressive wish was perceived as dangerous and was defended against by the fantasy formation of the lioness.

8. Severity of patient's asthma seemed related to mother's pregnancy and anxieties.

SUMMARY AND DISCUSSION

1. Eighteen children, hospitalized for asthma, when exposed to their own house dust showed no demonstrable change in their respiration irrespective of their skin sensitivities to house dust.

2. Our clinical studies describe a need for closeness in the asthmatic child which is expressed here as a regressive wish. This regressive wish is felt by the child's ego as obstructive to further growth and development, and therefore as dangerous. This psychological conflict allows for an explanation of why hospitalizations lead to improvement of asthmatic symptoms.

3. We have described a methodology for validating clinical impressions. Our results are reported as trends which hold true only for *this* asthma group vs. *this* control group. We think that the analysis of our psychological test data shows that it is possible—though difficult—to devise objective ways of measuring dynamically meaningful hypotheses. We also feel there is good reason to believe that our particular choice of hypotheses has been fruitful in the study of asthma in children.

4. In a clinical study of the mothers of asthmatic children, we found evidence of the mother's wish to maintain the child in

an infantile dependent state. Further, that this way of dealing with the asthmatic child stemmed from mother's own early unresolved conflicts.

BIBLIOGRAPHY

1. Abramson, H. A.: *J.A.M.A.*, 150: 1952.
2. Cobb, S., and McDermott: *Psychosom. Med.*, 1: 1939.
3. Coolidge, J.: *The Asthmatic Bond—A Special Mother-Child Relationship*. Read at the Annual Meeting of the American Orthopsychiatric Association, New York, March, 1954.
4. Deutsch, F.: *Artistic Expression and Neurotic Illness: The Respiratory Neurosis of Charles Kingsley*. Read at Smith College, July 27, 1947.
5. ———. *Acta Med. Orient.*, 10: 1951.
6. ——— and Murphy, W. F.: *The Clinical Interview*, Vol. I. New York: International Universities Press, 1955.
7. Deutsch, H.: *The Psychology of Women*. New York: Grune & Stratton, 1944.
8. French, T. M., and F. Alexander: *Psychosom. Med. Mon.*, 4: 1941.
9. Gerard, M. N.: *Nerv. Child*, 6: 1946.
10. Hallowitz, D.: *Am. J. Orthopsychiat.*, 24: 1954.
11. Jessner, L., John Lamont, Robert Long, Nancy Rollins, Babette Whipple, and Norman Prentice: *The Psychoanalytic Study of the Child*, 10: 1955.
12. Lewin, B. D.: *Psy. Quart.*, 21: 1952.
13. Miller, H., and Baruch, D. W.: *Psychosom. Med.*, 10: 1948.
- 13A. Murray, H. A.: *Explorations in Personality*, New York: Oxford University Press, 1938.
14. Rogerson, C. H., Harcastle, D. H., and Duguid, K. (1935), *Guy's Hosp. Rep.*, 85: 1935
15. Saul, L. J., and Lyons, J. W.: *Motivation and Respiratory Disorders*. In: *Recent Developments in Psychosomatic Medicine*, ed. E. D. Wittkower and R. A. Cleghorn. New York: Lippincott, 1955.
16. Sperling, M.: *Psychosom. Med.*, 11: 1949.
17. Unger, L., and Unger, D. H.: *J.A.M.A.*, 150: 1952.

DISCUSSION

ABRAM BLAU, M. D. (New York, N. Y.).—I am impressed with this preliminary report of a basic piece of research in child psychiatry and psychosomatic medicine. The authors more or less accept that the organism is a holistic biological unit, that the dichotomy of physiology and psychology is an artificial abstraction, that both and more must be considered in psychosomatic research. Furthermore, they examine the psychosomatic principle of asthma of French and Alexander concerning the regressive drives to a symbiotic relationship with the mother. Following Saul and Lyons, asthma is also connected with psychological conflictual drives and counter-drives regarding the "memory" of the organism for the intrauterine phase, when the respira-

tory and integumental systems function in the medium of amniotic fluid.

The authors are to be commended for also examining physiological factors. They found that house dust was not a crucial factor. Pollen sensitivities should also be tested against the psychological factor and, to my mind, until proven or disproven, we should not yet commit ourselves one way or the other. It is my belief that the pure allergic explanation is very rarely adequate as a degree of sensitivity to various allergens may be found in all persons at various times of life, especially in the young. Thus, something more, probably the psychological factor, must also be considered in these respiratory disorders.

In the last section, the authors seem to contradict themselves. On the one hand, they say that "no clearcut personality patterns in the mother emerged," and then go on to show the special symbiotic problems of the mothers. It is inconceivable to me that this and other psychosomatic conditions

in children are not intimately related to the maternal character neurosis. In our experience, the psychosomatic conditions in children are complementary *folie a deux* conditions. It can be argued, as suggested partly in this paper, that the illness in the child calls forth certain reactions in the mother. Undoubtedly there is a reciprocal process with mutual feed-back effects, but the basic etiology must be sought in the original maternal neurosis. This is important not only in theory, but if true, has basic implications for prevention and treatment. In psychiatric research of the type of this report, it would be well to examine clearcut theses and to avoid as much as possible the pitfall of straddling the issue on both sides of the question for the sake of an appearance of scientific fairness.

Finally, I know that the authors are aware of the limitations inherent to a small series of 18 cases. This worthwhile work should be continued and followed by other studies so that enough statistically significant data are accumulated.

CHARACTERISTICS OF AN ACUTE CONFUSIONAL STATE IN COLLEGE STUDENTS¹

HELEN B. CARLSON, M. D.^{2, 3, 4}

INTRODUCTION

In this preliminary report, characteristics of an acute confusional state in college students will be described, in terms of onset, course, and symptoms, as well as etiological factors, prognosis and treatment. A psychodynamic reconstruction of this state will be discussed. We would separate this group from the psychoses and psychoneuroses for the purposes of this study.

Confusion as defined in a textbook on psychiatry is a

disturbance of consciousness characterized by impairment of the sensorium by difficulty of grasp, bewilderment, perplexity, disorientation, disturbance of associative functions and poverty of ideas. The face of a confused patient presents a distressed, puzzled and at times, surprised expression. It is confined largely to the acute stages of certain mental diseases, especially those associated with toxic, infectious or traumatic factors, although it occurs also in hysterical and epileptic dream states and *sometimes under conditions of great emotional stress*(1).

Harry Stack Sullivan relates confusion to anxiety(2),

The effect of severe anxiety reminds one in some ways of a blow on the head, in that it simply wipes out what is immediately proximal to its occurrence. If you have a severe blow on the head, you are quite apt later to have an incurable, absolute amnesia covering the few moments before your head was struck.

Rosenfeld(3), in a psychoanalytic study of confusion in chronic schizophrenia, concludes that "The confusional state is associated with extreme anxiety" and "The whole self is in danger of being destroyed."

¹ Read at the 113th annual meeting of The American Psychiatric Association, Chicago, Ill., May 13-17, 1957.

² Address: 1215 Elm St., Winnetka, Ill.

³ In collaboration with Carl Christensen, M. D., Richard Cook, M. D., Robert Cutler, M. D., Alfred Flarsheim, M. D., Peter Giovacchini, M. D., Bernard L. Greene, M. D., William Nolan, M. D., Erich Paschkes, M. D., Charles Schlageter, M. D., Harry Segenreich, M. D., John Todd, M. D., Julian Pathman, Ph. D., and Clara Weimer, Ph. D.

⁴ We are indebted to Dr. Harry B. Lee for material on one case.

The problem of confusion first came to my attention about 8 years ago when I was called one night to a sorority house at Northwestern University to see a disturbed student.

The patient was a senior, about to graduate with Phi Beta Kappa honors, after which she planned to be married. When I saw her a diagnosis of paranoid psychosis was made and the patient was removed by her family to a sanitarium for treatment. From her sorority sisters and housemother a history was obtained that she had done very well scholastically up to 2 weeks prior to this consultation. At that time she became confused, unable to concentrate, anxious, and agitated, keeping the whole house in an uproar night after night. The question arose whether this patient could have been saved a psychotic break if she had been seen earlier.

Since that time through a Counsellor Educational Program it has been possible to see referred students within a few days of the development of confusion. Diagnostic interviews have been done on about 100 students in a state of acute confusion out of a psychiatric population of 4,000 students over an 8 year period. Most of them, with private psychiatric help, have been able to continue with their university course. A group of psychiatrists interested in the problems of the college-age student have formed a research seminar (under the sponsorship of the student health service of Northwestern University). For the past 4 years, this group, meeting bi-weekly, has studied the confusional state in college students of the Chicago area.

METHOD

Case material from 20 students, 17 of whom were from Northwestern and 3 from other colleges in the Chicago Area, included 8 to 353 psychiatric consultations per patient. Sixteen of the students were undergraduates and 4 were graduate students. In 1 case there was a tape recording of 17 hours of consultation; in the rest of the cases hour by hour notes of the psychiatric interviews were taken.

Detailed presentation of the onset, course, symptoms, and treatment of each was made

to the Research Seminar, followed by psychodynamic formulation and reconstruction of the significant etiological factors in the genesis of the confusional state. Comparison of the influential factors in these cases was made. This report expresses the opinion of the whole group. The responsibility for the discussion and conclusions reached, however, is mine.

RESULTS

Description of confusional state.—Presenting complaints of these confused students in addition to the terrifying confusion, included inability to concentrate, anxiety, alternate rage and depression, a feeling of helplessness and aloneness, disruption of goal motivation and a feeling of loss of personal identity. Examination revealed an attitude of desperately seeking to overcome the confusion, paranoid and depressive trends, and a withdrawal from activities, as well as agitation, anger or crying.

In Table 1 there is a tabulation of 7 of these symptoms in the 20 cases studied, with an evaluation of the severity of each symptom. Table 2 gives a group evaluation of the withdrawal from academic and social activity that was present at the time of con-

fusion, as compared with preconfusion activity.

To describe this confusion constellation more clearly, 2 cases referred to the same psychiatrist are presented.

CASE 19.—This 19-year-old single white girl was referred to the Student Health Service during her first year of college because of complaints of confusion, inability to concentrate, cutting of classes, and depression with suicidal threats. After one interview she was put in the Infirmary for her protection and her family was notified. An interview with a psychiatrist in private practice was arranged. Patient agreed to psychotherapy and was discharged from the Infirmary and allowed to continue in classes. She improved a great deal, temporarily, but 2 months later she was again brought in to the Student Health Service with a reactive depression. She was withdrawn from school and went home with her father. Her subsequent condition is not known to us.

In the initial interview she appeared dazed and talked with symbolic reference to her mother's home as "wanting to see the rolling hills of West Virginia," and her lonesomeness at school as "disliking a flat landscape." During the interview she spoke of being depressed and wandered over to the window as she was talking.

Interview with the private psychiatrist 5 days later, was described as follows: She said she kept the appointment because she is afraid of father who had accompanied her to the interview and did not want to spend spring vacation with him. Her parents have been divorced since patient was 4 years

TABLE 1
SYMPTOMS ASSOCIATED WITH CONFUSIONAL STATE

Case	Age	Sex	Confusion	Inability to concentrate	Anxiety	Agitation	Depression	Paranoid	Rage
1.....	22	F	xx	xxx	xx	—	xx	x	x
2.....	19	F	xxx	xxx	xx	xx	xxxx	x	xxx
3.....	17	M	x	x	x	x	xx	x	x
4.....	24	M	xxx	xx	xx	—	—	x	xx
5.....	20	M	xxxx	xxxx	xxxx	xxxx	xxxx	xxx	xxx
6.....	19	F	xxxx	xxxx	x	x	xx	xx	xxxx
7.....	19	M	xxxx	xxxx	xxxx	xxxx	xx	x	xxxx
8.....	19	F	xxxx	xxxx	xxxx	xxxx	xxxx	xx	xx
9.....	21	M	xxxx	xxxx	xxx	xxx	xx	xx	x
10.....	23	M	xxx	xxxx	xxx	xxx	xxx	x	xxxx
11.....	21	F	xxxx	xxxx	xxxx	xxx	xxx	x	x
12.....	20	F	xx	x	x	—	x	x	x
13.....	22	M	x	x	x	—	xx	—	x
14.....	18	F	xx	xx	x	—	x	x	x
15.....	23	F	xx	x	x	x	x	x	x
16.....	20	F	xx	x	x	x	x	xx	xxx
17.....	19	F	xxx	xxx	xx	x	x	—	xxxx
18.....	24	M	xxx	xx	xxx	xxx	xxx	xx	x
19.....	22	M	xxx	xxxx	xxx	xx	xx	x	xxx
20.....	23	M	xxxx	xxxx	xxxx	xxx	xx	x	xxx

xxxx—Extreme degree of symptoms
xxx—Marked degree of symptoms
xx—Moderate degree of symptoms
x—Slight degree of symptoms

Bureau Ednl. Res. Research
1958 Nov 11 11:15 COLLEGE
Date
Acc

TABLE 2

WITHDRAWAL FROM ACTIVITY DURING ACUTE
CONFUSIONAL STATE

Case	Psychosocial adjustment before confusion		Psychosocial adjustment during confusion	
	Academic	Social	Academic	Social
1.....	XXX	XXX	X	X
2.....	X	X	X	X
3.....	XXX	XX	XXX	X
4.....	XXX	XX	X	X
5.....	X	X	X	X
6.....	XXX	X	X	X
7.....	XXX	XX	X	X
8.....	XXXX	XX	X	X
9.....	XXX	X	X	X
10.....	XX	X	X	X
11.....	XX	XX	X	X
12.....	XX	XX	X	X
13.....	XXXX	XXXX	X	X
14.....	X	X	X	X
15.....	XXXX	XXXX	X	X
16.....	XXXX	XXXX	X	X
17.....	X	X	X	X
18.....	X	XXXX	XX	XX
19.....	XXXX	XXX	X	X
20.....	XXXX	XXX	XXX	XXX

XXXX—Excellent adjustment

XXX—Good adjustment

XX—Fair adjustment

X—Poor adjustment

old and although she had been in father's custody, she wanted to visit mother during spring vacation. Father had demanded that she use her own money for next quarter's school expenses rather than use it for the trip to visit mother.

Patient was neatly dressed in a man's shirt and Bermuda shorts. Throughout the interview she paced about the office or sprawled on the chair or couch, sat on the floor, looked at the books and thoroughly inspected every detail of the office. She talked rapidly and coherently but was easily distracted. "I don't want to see my father. Can he hear me? Your couch is hard. Those are nice bookends. Why doesn't he leave me alone? I won't talk to him. Where does this door lead to? What time is it?" She appeared tense, anxious and constantly on the move. Toward the end of the interview she had quieted down and was sitting cross-legged on the chair. She wanted to know if therapist was going to talk to her father. She said she wouldn't be caught in the same room with him. She didn't see how talking about her problems would help her, but she agreed to arrange for psychotherapy twice a week. She ignored her father as she left the office.

Patient described her situation as follows: she was struggling with the same problems that she had most of her life, i.e., the fact that when she was 4, father divorced mother on grounds of adultery and took patient and her 1½ year younger brother into his custody. Mother moved out of the house and patient was restrained from seeing her. Father had

wanted her to be a boy and treated her as one, encouraging her into active sports. He was alternately seductive toward patient and hostile, cold and restricting. Patient and her brother united against father. About 3 or 4 years after the divorce father married a woman much younger than himself who could not cope with the intense relationships between father and children. As patient matured she began to hope to get out from under father's domination and her projected visit to her mother during spring vacation was important to her from this point of view. Her father's frustrating it, patient felt, was one of the precipitating events. Another factor associated chronologically with the onset was the fact that she had, for the first time, developed a close relationship with a boy. Apparently this relationship increased her ambivalent conflict about men. Up to this time patient had handled her fears of men with a counterphobic attitude, engaging in dangerous sports, (skiing and horseback riding with her father) and excelling as a leader and a student. Her associations indicate that development of an attachment to her boyfriend revived the memory of her parents' separation and divorce and undermined her security. These attitudes were expressed directly and in the transference relationship with the therapist. Patient came to treatment 12 times over a 3 month period, canceling and breaking many appointments, as a provocative expression of her conflict. Her confusion subsided, the depression lifted somewhat and she attended classes more regularly. However, an accident to her boyfriend, for which she blamed herself, precipitated a reactive depression with suicidal impulses to the point where she was forced to withdraw from school.

The dynamic formulation of this case is as follows: the urge for independence from a restricting father, that came with maturation, intensified the conflict with father and increased her insecurity. The development of a close relationship with a boy with its sexual temptation in an insecure college environment, reactivated the childhood trauma with fear of catastrophe that had beset her at the age of 4 when her parents were divorced. Feminine identification with her mother, was associated with the expectancy of being unsuccessful in marriage and being virtually an outcast as her mother was. Death wishes toward her father were probably reactivated when her boyfriend was injured. The subsequent reactive depression can be understood as a transformation of her guilt. Pictures the patient painted at the time of her confusion expressed feelings of isolation and catastrophe. One was a scene of a barren throne room. A child was standing behind an empty throne. The king's crown had rolled onto the floor. Another picture was one of desolation and isolation. An erupting volcano had laid barren the whole landscape.

CASE 2—This 22-year-old girl was a junior at Northwestern, having transferred the previous fall from a girls' college. She was referred to the Health Service with symptoms of mild confusion, inability to concentrate, cutting classes, and depression with suicidal preoccupation. When she was 3 her security was shaken by several terrifying

events: 1. she was unprepared for her sister's death; 2. her mother almost died of an illness for which she had been hospitalized; and 3. she had heard her parents quarreling and threatening to separate because of an affair her mother was having. However, the mother did get well, the parents did stay together, and the family life settled down to one with some quarreling between parents. The family moved several times during patient's school years. Patient developed into a girl who was shy at first contact with a new situation, but was able to master it eventually, doing excellent work scholastically and becoming a leader in sports and newspaper work and dramatics. When she entered a small college 2 years before the present condition, she had a period of mild confusion and depression. She consulted a psychiatrist at this time, but left and went back to school after 5 hours of treatment over a 2 week period. She attributed this disturbance to feeling of being isolated and unwanted in a new situation. The more serious depression and confusion she had at Northwestern occurred in the spring of the year when she had developed a close relationship with a boy.

This patient was treated for 122 hours, being seen 2 or 3 times a week. At the end of that time there was some resolution of her conflicts. She graduated from college and moved to her home town where she was further treated.

The dynamic formulation in this case is similar to that of Case 1. Patient's feelings of fear and insecurity were handled during her childhood and early adolescence by overcompensatory achievements of academic success and leadership. However, in an insecure college environment when the sexual temptation associated with a close relationship with a boy developed, it activated early fears of catastrophe, associated with the threat of mother's death and threat of parent's separation when she was three. This reactivation of early fears increased her insecurity to the point where the overcompensatory mechanisms failed to bind her anxiety and confusion resulted.

Although in many cases there was a bewildering number of conflicting impulses expressed in rapid succession within any one interview in this confusional state, in some of our treated cases it was possible to recognize a sequence of symptoms in this kaleidoscopic picture. Three phases have been distinguished in the acute confusional state: 1. rage, 2. confusion, and 3. mastery of confusion. Each of these phases had characteristic conscious behavior and content of thought associated with it, as well as characteristic unconscious or preconscious productions such as dreams, daydreams, conscious feelings, artistic productions or actions. Description of these phases is as follows:

PHASE 1.—Rage was the predominant affect. The patient denied responsibility for

the feeling; it was felt to be an uncontrollable impulse, a foreign body. Usually the fear of acting-out the rage was intense, but sometimes there was little fear, only the impulse. In one case a student interested in becoming a minister developed an impulse to kill his wife and child. There was intense fear that he would not be able to control himself. Another student was afraid he could not control his impulse to strangle his fraternity brother while they were wrestling together. In another case, however, where a young man had the impulse to run down his girl friend with his car there was very little restraint in the form of fear. Dreams of catastrophe were commonly associated with this phase of the confusional state. In these dreams the violence came from an external, often deanimated source, such as tornadoes, volcanoes, fires, shipwrecks, or planewrecks. The affect associated with these dreams was excitement, rather than fear.

PHASE 2.—Confusion. This phase was accompanied by a feeling of terrifying isolation, helplessness, emptiness and worthlessness. Impulsive suicidal thoughts were expressed. Patients often felt that it would be better to be dead than in this helpless terrorized state. The feelings of terror and isolation were sometimes replaced by a formless feeling of dread and impending doom. Dreams included being terrified and alone on a desert or in some barren rocky place. One patient described his feelings as follows: "I felt like the wall was caving in on me—everything was pressing in on me. It was going round and round. I was so confused everything swam before my eyes. I was going to be squashed. I didn't know where to turn."

PHASE 3.—Problem solving with resolution of confusion. In this phase there was a building up of defenses. The affect associated with this stage was that either of an anxious wish to help mankind (a reaction formation against destructive impulses) or a feeling of depression. Problem-solving dreams were typical for this phase. They usually started with the patient being in a strange place trying to get home. He felt dazed and confused at the unfamiliarity of everything around him and made unsuccessful

ful attempts to find his way home. There was a feeling of hope in these dreams, however; and finally at the end of the dream he either found his way home or came to familiar territory and he knew which way to go. Locomotion was prominent in these dreams, usually on foot or in a car.

The sequence of these 3 phases is seen in the material of a 19 year old freshman in the school of engineering, who developed a confusional state 2 months before entering college. Excerpts from a tape recording of his case history include 3 successive dreams with associations characteristic of the three phases:

RAGE

Dream 1: "One morning my mother told me that the previous night I had grabbed my brother's arm who was asleep next to me. I had thought it was a snake. If my Dad and Ma hadn't stopped me I would have broken his arm—trying to kill the snake. My brother was screaming and was trying to pull away. I guess I must have had a death

grip on him, because when they did wake me up I saw finger marks on him. I was so surprised." The next night patient had the following dream:

CONFUSION

Dream 2: It seemed there was a hole in the wall and it just seemed to get bigger and bigger and bigger until it got as big as the room. I was terrified. I work up startled, nervous and shaking."

The next night patient had a sleepwalking experience where, without knowing it, he walked out of the bedroom window. The window screen broke his fall and he woke up bruised and shaken on the ground below. He was hospitalized for a few days by the family physician until he recovered his composure. During his recovery he had the following dream:

PROBLEM SOLVING WITH RESOLUTION OF CONFUSION

Dream 3: "I thought I was in a forest, a dense forest. The sidewalk with the street lights seemed like some place I wanted to head for. It was a highway and there was car coming down it and this car would take me back home."

Psychopathology in the Background.—Review of the backgrounds of these 20 students

TABLE 3

HISTORY OF PSYCHOPATHOLOGY PRIOR TO ONSET OF CONFUSIONAL STATE

Case	Psychiatric symptoms	Psychosomatic symptoms	Character neurosis
1.....	Depression Provocative behavior Previous confusion	Migraine headaches	Hysterical
2.....	Fear of isolation Provocative behavior	Acne vulgaris	Schizoid
3.....	Feelings of inferiority	G.I. distress-underweight	Compulsive
4.....	Rage reaction Conversion symptoms	—	Compulsive
5.....	Anxiety-learning phobia	—	Schizoid
6.....	Anxiety	Amenorrhea	Schizoid
7.....	Anxiety	—	Hysterical
8.....	Anxiety-sleepwalking	—	Compulsive
9.....	Depression	—	Hysterical
10.....	—	Fainting	Hysterical
11.....	Anxiety	—	Schizoid
12.....	Depression Provocative behavior	Colitis	Compulsive
13.....	Depression Provocative behavior	—	Compulsive
14.....	Depression Temper tantrums	—	Compulsive
15.....	Depression Provocative behavior	—	Compulsive
16.....	Depression Provocative behavior	—	Compulsive
17.....	Depression-rage reaction	—	Schizoid
18.....	4 episodes of confusion in past 5 years	G.I. distress	Compulsive
19.....	—	—	Compulsive
20.....	Fear of cancer Anxiety—Depression	Fatigue	Compulsive

revealed that for the most part they came from middle class American backgrounds, representing all areas of the country. All but 2 lived on the college campus. All of these students were in the upper half of their high school class and on the whole they were successful socially in high school. There was a diversification of character structure as well as previous psychiatric and psychosomatic illnesses as evaluated by us. Four students were considered to have an hysterical character, 11 a compulsive character and 5 a schizoid character. Histories revealed psychiatric symptoms prior to our examination to be: previous confusion in 3 cases, provocative behavior in 5 cases, depression in 8 cases, anxiety state in 5 cases, aggressive behavior in 3 cases and one case each of sleepwalking, cancer phobia, learning phobia, fear of isolation and feelings of inferiority. (Table 3.) Psychosomatic symptoms included 2 cases of gastrointestinal distress and one case each of migraine headaches, spastic colitis, acne vulgaris, amenorrhea, underweight, fainting and fatigue. None of these students was seriously handi-

capped physically. In the early family background extreme parental insecurity and disharmony were revealed. Before the patient was 6 years old there was a divorce in 2 cases, threat of separation in 4 cases, psychosis of the mother in 2 cases, and death of the father followed by depression of the mother in one case. In 4 cases the father wanted a boy and got a girl, which led to rejection of the girl in the feminine role. In 2 cases there was rejection by the mother who was busy taking care of ailing grandparents. In 4 cases there was excessive paternal pressure on the patient to succeed. In 2 cases there was early maternal deprivation due to economic hardship in an emigrant family. (Table 4.)

Factors Associated with Onset.—The actual circumstances of onset and the immediate precipitating event were often lost in confusion, but from the material we have, the last straw was usually insignificant in and of itself. For example, the confusion may follow a phone call or letter from home where usual parental criticism is expressed, or it may occur during an examination or, pos-

TABLE 4

TRAUMATIC EVENTS OR SITUATIONS IN CHILDHOOD IN STUDENTS WITH ACUTE CONFUSIONAL STATE	
Case	Traumatic situations or events
1	Mother almost died of illness when patient was 4. Mother had affair and parents threatened to separate when patient was 4.
2	Father divorced mother for adultery when patient was 5 and took patient and brother into his custody. Father wanted patient to be a boy and treated her as one.
3	Psychotic grandparents living with family. Maternal neglect of patient due to economic hardship of immigrant parents.
4	?
5	Suspicious mother--intimidating father.
6	Mother had manic-depressive psychosis since before patient's birth. Patient "conceived in hate." Patient raised by erratic relatives and housekeepers.
7	Mother rejected patient to take care of sick parents and demanding husband.
8	Economic hardship in immigrant parents. Parental disharmony with threat of separation.
9	?
10	Physician uncle emotionally involved with mother lived in home. Seductive and rejecting toward patient, diagnosed patient as "effeminate" without proper cause.
11	Father attempted to push Mother out of car when Mother pregnant with patient. Parents divorced when patient was 1.
12	Father wanted boy. Parents threatened to separate.
13	Father ill, mother insecure. Parental disharmony with threat of separation.
14	Father unfaithful. Excessive parental pressure on patient to succeed.
15	Father wanted boy. Mother mentally ill, committed suicide when patient was 13.
16	Parents wished patient to be a boy. Parents threatened separation.
17	Father died when patient was 3. Mother depressed.
18	Father passive and silent. Mother dominating and intolerant. Patient "squeezed" between two preferred siblings.
19	Father demanding and critical.
20	Mother mentally ill when patient was 2. Mother seductive toward patient.

sibly, during or after an argument with a roommate, and so on. (Table 5.)

The emotional stratum upon which these minor events were based, however, is of extreme importance. The three commonest problems of these students were: 1. Insecurity due to a new environment (or threat of a new environment). Of the 20 students studied, 17 of them had recently come to college and the other 3 were anticipating career and marriage problems following graduation. 2. Difficulty in making a satisfactory heterosexual adjustment. All 20 of these students were concerned with their

sexual adjustment in the college life, where, who one dates and how much are of great status importance. In 13 cases there was a feeling of trauma at the sexual level prior to the onset of the confusional state. Most of these students were overwhelmed by the development of their first serious love relationship. In only one case did the relationship proceed to the point of intercourse. 3. Conflict with parents over choice of career. In 9 cases there was a conflict between the student and his parents over choice of career. Usually a father wanted his son to prepare for a career similar to his own, irrespective

TABLE 5

FACTORS ASSOCIATED WITH ONSET OF ACUTE CONFUSIONAL STATE

T—Transfer student F—Freshman S—Senior GF—1st year Graduate

Case	Status	Situation and events
1.....	T	Confronted by heterosexual commitment.
2.....	F	Confronted by heterosexual commitment coincidental with conflict with demanding father who kept patient from divorced promiscuous mother.
3.....	T	Confronted by heterosexual commitment. Living with severely disturbed family. Conflict with demanding father, psychotic grandparents, rejecting mother.
4.....	T	Strong dependence on father figures. Disturbed when exposed to sexual temptation.
5.....	T	Father used patient as vehicle for own ambitious demands by demanding that he become physician, contrary to patient's inclination or capability, disturbed mother.
6.....	T	Being sent away to college understood by patient and psychotic parents as a final and total parental rejection.
7.....	F	Patient's winning scholarship to college represented a threat to father's role as head of household and led to separation of parents.
8.....	F	Married (and accidentally became pregnant) to spite father for not allowing her to marry boy she loved. Father controlled patient by threat of coronary if displeased.
9.....	S	Accepted to medical school. Mother died 2 yrs. previously. Sexual temptation toward provocative stepmother made patient feel unworthy to become physician.
10.....	S	Slept with mother until left for college. In competition for mother with uncle (physician), seductive toward mother. Worried about career, rejected by girlfriend.
11.....	T	Heterosexual temptation and rejection by stepfather and psychotic mother.
12.....	FT	Confronted by heterosexual commitment. Death of favorite aunt with whom patient was in competition for father's affection.
13.....	TS	Delinquent behavior in high school. Anxiety re career and marriage.
14.....	F	Parental pressure for social success. Disturbed when discovered father had a mistress.
15.....	S	Depreciated by father who had wanted a boy. Mother committed suicide when patient was 13, anxiety following intercourse with boy she planned to marry.
16.....	GF	Car accident two yrs. previously in which boyfriend died. In conflict with father who objected to marriage choice.
17.....	FT	Father died when patient was 3. Mother used suicide threat to push patient to succeed academically.
18.....	GF	External pressure due to wife, infant, full time job and school work. Conflict between responsibility toward family and ambition to become minister.
19.....	GF	Father demanded academic success. Sexual temptation of dormitory life preoccupied patient and kept him from studying.
20.....	GF	Threat of mother's death from Carcinoma of breast. External difficulties in getting married. Fear of cancer from rectal fissure.

of whether or not the student had the capability or inclination to do so.

Actual traumatic events were of relatively minor importance. In no case was the confusion directly related to illness or accident.

Outright rejection of the patient by the parents was of importance as a precipitating event in only 2 cases. In both cases the mother was psychotic and the father joined forces with her against the girl. In both of these cases the patient felt that she was not wanted at home and going away to college meant banishment from the home.

TREATMENT

These acutely confused students were considered to be psychiatric emergencies. They were seen by a psychiatrist immediately after the confusional state was recognized. All 20 students lost their acute confusional symptoms and 18 of them were able to continue in school and make a psychoneurotic

adjustment. (Table 6.) The treatment period is too short as yet to determine whether these favorable results are sustained. Of the 2 who did not meet the patient developed a reactive depression following a serious accident to her boyfriend and she withdrew from school. Another patient continued with her schizoid adjustment following resolution of the confusion. She attempted to fail at her school work to spite her parents and was advised to withdraw from school.

DISCUSSION

Our findings substantiate the conclusions of Rosenfeld (3) that confusion results from an overwhelming of the ego with destructive impulses. We would explain the confusion as follows: these patients reacted with rage to an insecure situation with a combination of internal and external conflicts, so that they felt trapped in a state of anxiety

TABLE 6

TREATMENT

Case	No. of hrs. of Rx.	Type of Rx.	Adjustment at end of Rx.		Follow-up on treatment	
			School	Social	Months after Rx.	Outcome
1.....	122	Brief Psychotherapy	XXXX	XXXX	6	Further Rx.
2.....	12	Brief Psychotherapy	x	x	4	Further Rx.
3.....	353	Brief Psychotherapy Intensive "	XXXX	XXXX	12	Improvement sustained
4.....	25	Brief Psychotherapy	xx	xx	24	Improvement sustained
5.....	22	Brief Psychotherapy	x	x		Further Rx.
6.....	262	Brief Psychotherapy	x	x	30	Further Rx.
7.....	17	Brief Psychotherapy	xx	xx		
8.....	256	Brief Psychotherapy Intensive "	XXXX	XXXX	36	Improvement sustained
9.....	25	Brief Psychotherapy	xxx	xxx	1	Further Rx.
10.....	250	Brief Psychotherapy Intensive "	XXXX	XXXX	24	Improvement sustained
11.....	12	Brief Psychotherapy	xxx	xxx	3	Further Rx.
12.....	44	Brief Psychotherapy	xxx	xxx		
13.....	72	Brief Psychotherapy	xxx	xxx		
14.....	8	Brief Psychotherapy	xxx	xxx	216	Further Rx.
15.....	104	Brief Psychotherapy	xxx	xxx	24	Improvement sustained
16.....	40	Brief Psychotherapy	xxx	xxx	12	Improvement sustained
17.....	22	Brief Psychotherapy	x	x	1	Further Rx.
18.....	30	Brief Psychotherapy	xxx	xx		
19.....	25	Brief Psychotherapy	xxx	xx	24	Improvement sustained
20.....	105	Brief Psychotherapy	XXXX	XXX	1	Further Rx.

XXXX—Excellent adjustment

xxx—Good adjustment

xx—Fair adjustment

x—Poor adjustment

whether they made attempts to change their situation or retreat from it. The rage toward others was transformed into a feeling of being unloved which was associated with a feeling of being alone and isolated, according to the formula, "Because I do not love, I am not loved; therefore, I am worthless." The symptom of confusion appeared to be a preconscious cognition of ineffectiveness (or loss) of defenses.

Secondarily, confusion may be used as a defense against the rage during the period of reintegration until functioning defenses have been restored.

Although the acute confusional state described here has some features in common with other nosological entities, it is not identical with any other condition we have found described in the literature.

The confusional state is similar to the acute schizophrenic reaction in the suddenness of onset and in the withdrawal from activities. However, it differs from schizophrenia in the following ways: 1. It occurs in relatively healthy individuals. 2. It is a transient, reversible condition rather than a chronic irreversible one. 3. The regression that takes place is not accompanied by ego fragmentation such as that seen in schizophrenia; for example, there are no delusions, hallucinations, or depersonalization. 4. The transference reaction is one of desperately seeking help, appropriate to a stress situation, rather than the remoteness of schizophrenia. 5. There is no disassociation of affect, as found in schizophrenia. This condition is similar to what Sullivan(2) has briefly described as "failure of disassociation," by which he means a failure to develop paranoid or depressive defenses. He says failure of disassociation is accompanied by "dread and horror when a person is led to reveal his weakness." "These feelings are the nearest anybody comes to the reality of the disassociated components of his personality unless he plunges into the waking bad dream of schizophrenia."

On the other hand, this condition has some features in common with that of depression as described by Edward Biebring(4). He finds a withdrawal from activity, and a feeling of worthlessness and helplessness in depression which he considers due to an ex-

haustion of ego defenses. The confusional state, however, includes more than this, i.e. paranoid trends, inability to concentrate and confusion.

We consider the acute confusional state to be an emergency anxiety reaction to a combination of stressful conditions, where environmental insecurity is associated with internal conflicts of both shame and guilt in young adults of reasonably strong ego, who have suffered severe infantile trauma.

The mechanism of regression to the confusional state has not been defined as yet, but one possible explanation is the following: the patient, becoming enmeshed in a shame-guilt spiral (as described by both Alexander and Piers), is catapulted back to an early, poorly-differentiated stage of ego development, where defenses are weak and free-floating anxiety is great.

Our favorable results can be attributed to the fact that this condition is transient, and that it is reversible. Factors influencing this good prognosis are: 1. The ego is fairly strong in these relatively well-adjusted students. 2. There is an ego resiliency associated with youth. 3. The relatively irreversible commitments of adulthood with reference to choice of career and object relation have not yet been made. The opportunity for improvement in the life situation is greater than it is in adults. The good prognosis in these students is in accord with a number of reports in the literature on adolescence, such as Aichhorn(7) in the field of delinquency, Grinker(8) in army stress situations, and Farnsworth(9), Wedge(10), and Darling(11) in the field of college mental health.

Our findings are in general agreement with the thesis of Erickson(12) who speaks of "identity diffusion" in describing the problems of adolescence. He considers this condition to be emergency reactions in the maturational process rather than actual psychopathological reactions. However, we have seen this acute confusional state in older adults, so that we would not consider this state to be exclusively an adolescent problem.

To what extent the theory of Selye(13), that stress, internal as well as external, is important in the psychopathology of this confusional state remains to be seen.

CONCLUSION

An acute confusional state has been described, occurring in young adults in colleges in the Chicago Area with specific characteristics as to genesis, presenting complaints, onset, course, and treatment. Psychodynamic reconstruction is as follows:

In childhood these patients were bound in an extraordinarily strong dependent relationship to their parents through guilt and fear, engendered by parental instability and disharmony. With subsequent dependent gratification and support these patients were able to achieve a conforming type of adjustment and gain success in academic and social achievements. However, in young adulthood when they attempted to find their own identity, through choice of heterosexual partner and choice of career, in the college environment, devoid of dependent gratification, their previous adjustment was inadequate to meet their needs. Sexual temptation or commitment led to guilt, which led to retreat. Retreat, in turn, led to shame and ridicule from the peer group. To avoid the shame, another attempt at conforming sexual behavior is attempted, and once more guilt, retreat and shame. In this way, either thrusts toward accomplishment or retreat from it are associated with anxiety. Under these circumstances, if the dependent gratification from parents is cut off due to their criticism or disapproval, the patient regresses to an early childhood fixation point, associated with primary anxiety, rage, and confusion, where he feels isolated, worthless, mistrustful and depressed. Recovery from the confusion occurs when the patient, who desperately seeks help, finds someone to lean upon. If inadequate help to meet his needs is found, introjection or projection of rage may result.

Further study to delineate this confusional

state would include: 1. Psychological tests for independent verification of our results, 2. biochemical tests to compare the chemical changes in this condition with that found in anxiety states associated with other conditions, 3. further understanding of treatment and preventive measures, 4. sociological study of the college community to elucidate factors related to the development of security in young adults in college, 5. study of the background (family as well as the community) from whence these patients came and 6. control studies on college students without confusion.

BIBLIOGRAPHY

1. Noyes, A. P.: *Modern Clinical Psychiatry*, Philadelphia: 1939.
2. Sullivan, H. S.: *The Interpersonal Theory of Psychiatry*, New York: W. W. Norton and Company, 1933.
3. Rosenfeld, H.: *Internat. J. Psychoanal.*, **31**: 132, 1950.
4. Biebring, E.: *The Mechanism of Depression, in Affective Disorders* Ed. by Phyllis Greenacre, New York: International Universities Press, 1953.
5. Alexander, F.: *Internat. J. Psychoanal.*, **19**: 41, 1938.
6. Piers, G., and Singer, M. B.: *Shame and Guilt*. Springfield, Ill.: Charles C. Thomas, 1953.
7. Aichhorn, A.: *Wayward Youth*. New York: Viking Press, 1935.
8. Grinker, R. R., and Spiegel, J. P.: *Men Under Stress*. Philadelphia: Blakiston, 1945.
9. Farnsworth, D. L.: *Mental Health in Colleges and Universities*. Boston: Lowell Institute Lectures, 1956.
10. Wedge, B.: *Read at the 111th Meeting of the Am. Psych. Soc.*, 1955.
11. Darling, C. D.: *Am. Col. Health Ass. Bulletin* #26: 29, 1956.
12. Erickson, E. H.: *Human Development Bulletin*, **5**: 50, Published by the Human Development Student Organization, Ann Arbor, Mich.: Edward Bros., Inc., 1954.
13. Selye, H.: *J. Clinical Endocrinology*, **6**: 117, 1946.

AN EVALUATION OF FUNCTIONAL PSYCHOSES IN OLD AGE¹

W. S. WILLIAMS, M.D., AND E. GARTLY JACO, PH.D.²

For many years almost all psychoses appearing initially after the age of 60 have been regarded as the outward behavioral manifestation of cellular pathological change. A recent statistical study indicated that some 85% of psychoses occurring after the age of 60 were diagnosed as senile dementia or cerebral arteriosclerosis, and only 7% were considered to be functional in origin(13). Closer examination of these statistical studies, however, suggests that the incidence of these so-called organic psychoses is intimately related to certain social factors, such as occupation, marital status, etc. This seems to indicate that there may have been reluctance on the part of psychiatrists to make a diagnosis other than cerebral arteriosclerosis with psychosis, or senile dementia with psychosis, in patients over the age of 60. Although certain changes in intellectual capacity have been demonstrated to occur with aging, and would have to be considered in evaluation(10), it would seem to be doubtful that they could be established as playing a primary etiological role in all of these cases. The significance of these illnesses as a major public health problem was recognized(11), but research in this area was largely confined to investigation of anatomical and physiological pathology and palliative therapy (3, 12).

For some time reports have appeared which raised serious questions as to the validity of the established concept of etiology in these cases. Neuropathological studies of the brains of individuals who had shown marked behavioral aberrations during the later years of life, and the brains of others who had not shown behavioral disturbance, indicated no correlation between anatomical pathology and behavioral pathology(17). There were reports of the successful treatment of so-called senile psychotics by electro-

convulsive therapy(7), which at least suggested that there was a large functional element in many of these psychotic reactions, and that the same type of causal factors might be operating as in the psychoses occurring in the earlier years of life. These developments have now reached such a point that in some circles it is considered to be well established that the demonstrable anatomical pathology is not responsible for the psychoses occurring in later life(20).

Clinical experience at the University of Texas Medical Branch Hospitals seemed to indicate that there was a high incidence of functional psychoses occurring after the age of 60, and this contrast with the usual reported experience was so definite that a detailed review of the incidence of various diagnoses was undertaken. In a 5 year period, covering the calendar years 1950 through 1954, a total of 1,134 patients over the age of 60 was admitted, of whom a psychiatric diagnosis was made. Approximately 72% of the diagnoses were psychotic reactions of one type or another, and when these were examined as a group, we found that 70% were functional and only 27% were cerebral arteriosclerosis with psychosis or senile dementia with psychosis. The functional diagnoses were predominantly syndromes in which the symptom of depressed mood is characteristic. This furnished striking confirmation of previous suggestions that depressive illness is characteristic of this age period(15), and that transitory depressed periods are common(3). This contrasted sharply with the previously mentioned incidence report(13), in that illness characterized by depressed mood was reported as only slightly more frequently than other functional psychoses. Within an institution of this type, however, there were many factors which could operate to cause a bias in these findings. We were, therefore, somewhat hesitant to accept this evidence as completely valid, and felt that further investigation of a wider area might eliminate some of the factors which cause bias.

We compared our hospital incidence with

¹ Read at the 113th annual meeting of The American Psychiatric Association, Chicago, Ill., May 13-19, 1957.

² The Department of Neurology and Psychiatry, University of Texas Medical Branch Hospitals, Galveston, Texas.

a recent survey conducted by one of the authors(9), of the incidence in the entire state of Texas, during a 2 year period, of patients who were diagnosed as psychotic for the first time in their lives. This information was gathered from all psychiatric hospitals and services in the state, including both public and private, and from the office files of psychiatrists in private practice. These data when closely analyzed gave further evidence that there is a higher incidence of functional psychosis over the age of 60 than is generally thought. Of a total of 2,248 cases, aged 60 and over, 27% had a diagnosis of functional psychotic reaction, 62% a diagnosis of cerebral arteriosclerosis or senile dementia with psychosis, and 11% other organic psychosis, irrespective of the source of psychiatric diagnosis and treatment. When these were broken down to those diagnosed in a public mental hospital (state, city, county or veterans administration) and those diagnosed in teaching hospitals or private hospitals, a significant change occurred. The public mental hospital cases showed an incidence of 11% functional psychoses, 78% cerebral arteriosclerosis or senile dementia with psychosis, and 11% other organic psychoses. These figures agree fairly well with the previously mentioned incidence study. The incidence from teaching or private hospitals, however, showed a marked shift toward the functional disorders, with an incidence of 51% functional psychoses, 37% cerebral arteriosclerosis or senile dementia with psychosis, and 12% other organic psychoses.

We felt that these findings suggested that either a differential diagnostic bias was operating in the two different types of hospital, or that a significant difference existed between the kinds of psychotic patients in public mental hospitals, and those hospitalized in other institutions. This evidence seemed to us to be sufficient to indicate that there was a much higher incidence of functional psychosis in old age than previously reported, and that an investigation into the other causal factors was needed, as we suggested in a previous paper(22).

There have been indications in other studies that social factors were of significance(13), although these seemed to have been lost or ignored, principally due to the

belief that most psychoses were of an organic nature(14). In Malzberg's statistics from New York State there were indications that other than organic factors were operating in the cases in which an organic diagnosis was made: for instance, a person aged 60, whose spouse was still living was only one-third as likely to develop a psychosis as one whose spouse had died. A person aged 60 living on a farm or in a town less than 2,500 population was only one-half as likely to develop a psychosis as was the resident of an urban area. In other investigations it was found that significant improvement in overt behavior in so-called old age psychotics could be brought about by increased social activities in a mental hospital(1). There were sociological examinations of the role of the aged in our society which indicated that there were sources of difficulty which could operate as a causal factor in old age psychoses(5). Reduced social interaction or social disarticulation was implicated as an etiological or contributory factor in mental illness in old age(4, 8). There have been many theoretical papers and discussions which have urged the importance of certain psychological factors in mental illness in the later years of life, and have encouraged research from this approach(4, 18, 23). There were proposals that investigations of this area be organized within the frame of reference of age and sex categories in the life cycles of the individual(2). It seemed then that a detailed analysis of the previously mentioned statewide incidence study(9) should give confirmatory evidence of the operation of societal causal factors if they were of significance in the etiology of the mental illnesses of later life. There are 3 major ethnic groups in the state—Anglo-American, Spanish-American and Negro, which made it possible to compare additional social-cultural differences. In view of the possibility of diagnostic bias we did not feel that it was wise to discard the cases in which a diagnosis of cerebral arteriosclerosis or senile dementia had been made, hence, the following analysis is of the total incidence (Table 1). We compared the incidence rates for the 3 ethnic groups by rural versus urban, migrant status, marital status, and occupational class. We found that for patients becoming psy-

TABLE 1

ANNUAL INCIDENCE RATES OF PSYCHOSES AGED 65 AND OLDER BY SEX, ETHNICITY, URBAN-RURAL, AND MIGRATION-STATUS, PER 100,000 POPULATION, TEXAS, 1951-1952

	Males: (Age 65+)			
	Anglo	Spanish	Non-white	Total
Total rate	206	81	139	188
Urban	237	90	178	210
Rural	129	18	83	108
Migrant	150	57	85	129
Non-migrant ...	144	52	112	128

	Females: (Age 65+)			
	Anglo	Spanish	Non-white	Total
Total rate	155	65	86	141
Urban	186	57	99	158
Rural	89	67	55	82
Migrant	120	25	67	100
Non-migrant ..	114	47	61	98

chotic for the first time past the age of 65, the total rate for Anglo-Americans was highest, followed by the non-white and the Spanish-American last. The rate was higher for males than females in all 3 ethnic groups, but the rate among Anglo-American females was higher than for males in the other 2 ethnic groups, indicating that the Anglo-American group as a whole is much more strongly affected by whatever factors are operating to cause psychoses in later life.

The urban rate was higher for the sex-ethnic groupings than the rural rate, with one interesting exception. The Spanish-American female rate was higher in rural areas than in urban areas and the rural Spanish American female had a higher rate than the rural Spanish-American male. When rates were examined by migrant status it was found that the non-migrants had a very slightly lower rate than the migrants, with the exception of non-white males and Spanish-American females. In these 2 categories the non-migrant rate was appreciably higher than the migrant rate.

When the incidence was examined in terms of marital status (Table 2), certain significant differentials were found. The rates were generally lower for females than males in all categories. For both sexes the highest rates were for the divorced, followed in order by the separated, single, widowed, and finally married.

TABLE 2

ANNUAL ADJUSTED INCIDENCE RATES OF PSYCHOSES AGED 65 AND OLDER BY SEX, ETHNICITY, AND BY MARITAL STATUS, PER 100,000 POPULATION, TEXAS, 1951-1952

	Males: (Age 65+)			
	Anglo	Spanish	Non-white	Total
Single	339	86	339	305
Married	156	29	90	131
Divorced	645	—	559	548
Widowed	221	219	152	212
Separated	386	39	161	392

	Females: (Age 65+)			
	Anglo	Spanish	Non-white	Total
Single	222	43	355	216
Married	158	39	41	127
Divorced	358	66	278	309
Widowed	138	89	61	121
Separated	262	33	282	293

When the ethnic groups are examined, considerably greater variation in the incidence of psychoses by marital status occurs. For the Anglo-Americans the rate for males is higher than for females for the single, divorced, widowed and separated, while the rates for the married are nearly identical. The Spanish-Americans, however, do not follow this same pattern. The rate for Spanish males is higher than for the females for the single and widowed, lower for the married and divorced, and about the same for the separated. The pattern again changes for the non-whites, with the non-white male exhibiting higher rates than the females for the married, divorced and widowed, and lower rates for the single and separated.

When the incidence is examined by occupational class, certain significant differentials are also found (Table 3). For the males, the highest incidence rates occur for manual workers, followed in order by the professional and semi-professionals, agricultural, service, clerical and sales, and finally managerial, official and proprietary occupations. The pattern differs for the females, with the professional and semi-professionals showing the highest rate, followed by the service, manual work, clerical and sales, agricultural and lastly managerial, official and proprietary occupations. The males exhibited a higher rate than females in the managerial, official and proprietary, agricultural and manual

TABLE 3

ANNUAL ADJUSTED INCIDENCE RATES OF PSYCHOSES
AGED 65 AND OLDER BY SEX, ETHNICITY, AND
BY OCCUPATIONAL CLASS, PER 100,000
POPULATION, TEXAS, 1951-1952

	Males: (Age 65+)			Total
	Anglo	Spanish	Non-white	
Professional and semi-professional	420	240	512	407
Managerial, official and proprietary	178	—	—	132
Clerical and sales	214	77	—	169
Service	192	53	236	178
Agricultural ...	417	80	218	347
Manual work ..	548	82	288	453
	Females: (Age 65+)			Total
	Anglo	Spanish	Non-white	
Professional and semi-professional	795	—	—	587
Managerial, official and proprietary	129	—	—	95
Clerical and sales	297	—	—	220
Service	635	49	447	534
Agricultural ...	151	—	126	128
Manual work ..	498	98	—	381

work occupations, and lower in the semi-professional, professional, clerical and sales and service occupations.

This latter pattern of differences between the sexes was followed by the Anglo-Americans. For the Spanish-Americans, the males were higher than the females in the professional and semi-professional, clerical and sales, and agricultural occupations, lower in only manual work occupations, and about the same for the managerial, official and proprietary and service occupations. The non-white males were higher than the females in the professional and semi-professional, agricultural and manual work occupations, lower in the service occupations, and the same for managerial, official and proprietary and clerical and sales occupations.

DISCUSSION

These differentials in incidence rates indicate that the distribution of psychoses after the age of 60 is not random or equal in the

population as would be expected if the primary etiology was anatomical or physiological. Instead the occurrence of psychoses in the later years of life seems to be intimately related to certain social factors, and the significance of these social factors seems to vary with cultural sub-groups. It is not possible, of course, to draw conclusions regarding etiology from epidemiological data. It is safe to say, however, that this epidemiological study furnishes evidence of the close relationship between social factors and mental illness in later life. For instance, the factors of ethnicity, as demonstrated by the singular incidence pattern of the Spanish-American female, and occupation, as indicated by the high rate among manual workers. This suggests that the change in status which occurs with aging is significant and that aging must be considered as a social process as well as a physical process.

The concept of "social aging" is based on the characteristic attitudes in our society toward the later years of life. It has been demonstrated that relatively well adjusted young people as well as young people evidencing severe maladjustment regard old age as the most unfavorable time of life (6, 21). Unlike some other societies, age is not assumed to have accrued wisdom and judgment to the individual, but is assumed to have caused him to be burdened with useless ideas, poor judgment, and the inability to contribute anything significant to his society. It is well to keep in mind that the older person not only is affected by these attitudes in others, but has this same attitude toward aging himself. There is a progressive decrease in physical stamina with aging which is experienced by the person as easy fatigability and a low energy level, and which makes it difficult for him to develop and maintain motivation (19). At the same time he has become more emotionally labile and finds it less easy to use defense mechanisms. He is not as capable of assimilating new learning and integrating new experience for later use (10). In addition the acuity of the special senses such as vision and hearing diminishes, and it is less easy to maintain contact and understanding in social situations. The individual is aware of these changes, and is usually as willing as are

others to regard them as the cause of his disturbed emotional state.

If the neuro-physiological aging process is regarded as a predisposing rather than as a precipitating factor in mental illness in later life, perhaps a more satisfactory explanation of these disorders can be achieved. If physical aging is regarded as increasing the individual's susceptibility then an investigation of the socio-environmental stress-processes in the terminal segment of the life cycle may contribute to a greater understanding of the so-called "old age psychoses."

Contemporary industrial-urban society has devalued the position of its elderly members. The family system has little or no place for them, reducing their sphere of significance to the two generations of parents and offspring. The economic institution seeks to eliminate its older workers through retirement at increasingly younger ages, rewarding its younger and more productive, competitive members. Consequently, the twilight phase of the human life-cycle is a period of stress, a socially induced situation for our elderly. This circumstance may be labeled as "forced dependency," wherein people who have been active and managed to survive to old age are now no longer allowed to be independent and productive.

If one views the social situation as a basis for recognizing personal identity, then an identity that is developed and sustained for the typical "three-score and ten" years may not prove satisfactory in adapting to the living conditions of old age. A high degree of autonomy and independence developed by providing a livelihood for self and possibly others, and a relatively fixed self-concept or identity hardened by a lengthy course of human experience might typically characterize many of those surviving to old age.

The older person, however, is faced with increasing social isolation, lack of occupational opportunity and loss of whatever status and prestige he might have had both occupationally and within the family. In short, the older person finds that his social role which may have been achieved in earlier years at the cost of considerable anxiety, strenuous effort and the sacrifice of personal pleasure has now become obsolete. He has outlived his mode of usefulness to self and

others, and to survive must attempt to establish a new role identity. This "role obsolescence" occurs when the individual has lost an appreciable amount of his biological resources, in a society which is willing to accept him as a burden but not as an equal.

Any ensuing psychiatric disorder may thus be the resultant of a sequence of unsuccessful attempts to cope with the effects of being old and may exhibit any one or a combination of 3 major components: 1. a withdrawal and insulation from a society in which they are experiencing a loss of personal identity, 2. a distortion of reality in an attempt to regain or maintain identity, 3. self depreciation in response to their apparent lack of significance and worth.

SUMMARY AND CONCLUSIONS

1. Recent and more refined epidemiologic data indicate that the incidence of functional psychoses in the elderly population is much higher than earlier studies have indicated.

2. Analysis of the epidemiologic data indicates that there is a close relationship between certain social factors and the incidence of mental illness in later life.

3. Evidence presented here and in previous research reports which are cited are interpreted to suggest that "social aging" is at least as significant as physical aging in the occurrence of mental illness in later life.

4. The concept of "forced dependency" is suggested to describe the attempts of society to relegate its independent and autonomous elderly members to a secondary status. "Role obsolescence" is suggested as describing the characteristic fate of the elderly person who has outlived his mode of usefulness to self and others. The reaction to this obsolescent dependent state with its loss of personal identity is suggested as a major source of behavior pathology in the aged individual.

5. The conclusion seems to be warranted that a functional illness characterized by depressed mood is as typical or more typical of mental illness in this age period than is an illness characterized by a chronic brain syndrome. The possibility of a functional form of senility in addition to the more commonly recognized organic pathology might also be considered in investigating the psychiatric disorders of the aged.

BIBLIOGRAPHY

1. Barrabee, P.: Community, mental hospital and the aged psychotic patient, in M. Greenblatt, D. J. Levinson, and R. H. Williams: *The patient and the mental hospital*, Glencoe, The Free Press, 1957, Chap. 30.
2. Belknap, I., and Friedsam, H. J.: *Am. Socio. Rev.*, 14: 367, 1949.
3. Busse, E. W., Barnes, R. H., Silverman, A. J., Thaler, M., and Frost, L. L.: *Am. J. Psychiat.*, 111: 396, June, 1955.
4. Cameron, N.: Neuroses of later maturity, in O. J. Kaplan: *Mental disorders in later life*, Stanford: Stanford University Press, 1945.
5. Dunham, H. W.: Sociological aspects of mental disorders in later life, in O. J. Kaplan: *Mental disorders in later life*.
6. Feifel, H.: *Am. J. Psychiat.*, 111: 459, Dec., 1954.
7. Gallinek, A.: *J. Nerv. and Ment. Dis.*, 108: 293, 1948.
8. Jaco, E. G.: Reduced social interaction and old age psychoses, unpublished manuscript.
9. Jaco, E. G.: *Texas State J. of Med.*, 53: 86, Feb., 1957.
10. Jones, Harold E. and Kaplan, Oscar J.: Psychological aspects of mental disorders in later life, in O. J. Kaplan: *Mental disorders in later life*.
11. Malamud, W.: Psychiatric problems associated with aging in second symposium: Clinical problems of advancing years, Philadelphia: Smith, Kline and French Laboratories, 1951.
12. Malamud, W.: *Dis. Nerv. Syst.*, 2: 37, Feb., 1941.
13. Malzberg, B.: A statistical review of mental disorders of later life, in O. J. Kaplan: *Mental disorders in later life*.
14. Malzberg, B.: *Psychiat. Quart.* 17: 488, 1943.
15. Mittelman, B.: Psychosomatic medicine and the older patient, in O. J. Kaplan: *Mental disorders in later life*.
16. Rothschild, D.: Senile psychoses and psychosis with cerebral arteriosclerosis, in O. J. Kaplan: *Mental disorders in later life*.
17. Rothschild, D., and Sharp, M. D.: *Dis. Nerv. Syst.*, 2: 49, 1941.
18. Sands, S. L., and Rothschild, D.: *Jour. Nerv. Ment. Dis.*, 116: 233, 1952.
19. Shock, N. W.: Physiological aspects of mental disorders in later life, in O. J. Kaplan: *Mental disorders in later life*.
20. Tennent, J. J.: *Psychiat. Quart.*, 30: 249, 1956.
21. Tuckman, J., and Lorge, I.: *J. Psychol.*, 34: 137, 1952.
22. Williams, W. S., and Jaco, E. G.: A Re-examination of Mental Illnesses in Old Age. *Dis-eases of the Nervous System*, 18: 375, 1957.
23. Williams, W. S.: *Tex. State J. Med.*, 52: 669, 1956.

DISCUSSION

JACK SHEPS, M. D. (New York 29, N. Y.).—Drs. Williams and Jaco have presented definite evidence against the importance ascribed to organic

factors in the emotional disorders of the aged. Organic factors are partially determining, and I feel that too much weight has been given them in considering on what bio-social level an individual can function without symptoms. The degree and extent of mental activity are determined by the amount of cerebral dysfunction. The degree and extent of optimum physical activity are determined by physical function. However, the older age group usually can make their own adjustments if they can accept the social setting—the most crucial change in old age—so well detailed in this thoughtful and well organized paper.

In my opinion, enforced dependency and the consequent change in social role from the provider to the one being provided for is the major causative factor in emotional disorders of the aged. Consequent fear and rage often throw a fairly well functioning but decompensated brain into senile confusion or a paranoid reaction.

Weinstein and Kahn have described this effect on the psychotic symptoms of patients with brain tumors, and I have seen the same reaction in patients with senile psychoses. Depression and severe neurotic reactions also have their etiology in the forced dependency situation and the patient's inability to accept it.

The authors have described persons over 65 and their reaction to change of social role without mentioning the important intermediate group—the family. We are so accustomed to seeing our patients in institutions and outpatient departments of large hospitals without relatives, or deserted by them, that we are too prone to ascribe this to sociological changes. Closer inquiry, however, often reveals character disorders of such marked degree that no warm, affectionate, personal relationship ever existed for these people but only a coercive, domineering or clinging dependency. The pathology of their family relationships has been severe, and as soon as the very dependent children or relatives died, the remaining ones who did not have to tolerate such a demanding object-relationship abandoned the patient.

Often we see a disruption of the family equilibrium as the role of our patient changes from parent-in-fact to parent-in-name. Both the children and the patient fight against accepting this reversal of role and the forced dependency. Even the practical difficulties involved are often a defense against facing their parent as a helpless person for whom they have to provide. Therapy is done with the family by having all significant members learn to accept the parent's limitations of function and change of role. This nearly always results in great relief of anxiety on the part of all concerned and consequent diminution of symptoms.

The rush to institutionalize the aged parent is a manifestation of avoidance to accept the patient as he is and to understand his emotional needs. Working with the family is stressed because of the very poor survival rate of the senile patient in mental institutions. Actually, the dependency of old age is the same as in childhood and, in my opinion, the same principles of therapy apply.

DISCUSSION

KARL STERN, M.D. (Montreal, Canada).—During our work in the Old Age Counselling Center in Montreal, we were struck by the fact that senility in the sense of organic cerebral impairment played among our clientele a trivial rôle compared with functional affective disorders, character disorders, which for certain reasons were accentuated during old age, and difficulties of adjustment to retirement etc. However, our material was selective—namely ambulant clients, mainly of social welfare organizations. It is much more surprising to see that even among hospitalized patients of the higher age group the functional element is so preponderant over the organic senile and vascular. This brings to mind the statement by Grünthal that in the pathology of senile psychoses there is no absolute relationship between the degree of anatomical change and that of the psychotic manifestations. In the German literature there are scattered observations on senile brains in which a retrospect investigation of the patient's life history showed no signs of senile psychosis. All this becomes more interesting in the light of the present observations by Drs. Williams and Jaco, on the fact that there is no simple cause-effect relationship between morbid anatomy and psychosis, and about the importance of the functional element.

Incidentally, this observation may extend even to certain neurological disorders of old age. Spatz in his studies on the extrapyramidal system claims that those vascular lesions described by Pierre Marie in connection with arteriosclerotic Parkinsonism (*état criblé, état lacunaire* of the basal ganglia and the lower brain stem) can be found in control brains of old people who during life showed no extra-pyramidal symptoms. If this is true it can be explained only in two possible ways: either these lesions have no clinical neurological significance, or here, too, a second factor enters into the mechanism. Since Spatz made his statement without statistical details, these things need careful systematic re-investigation.

There are several ways in which the organic and the functional are combined in the psychoses of old age. There is, first, the senile, i.e. organic disturbance with a functional superstructure—what one commonly calls a depressive or a paranoid "coloring" of senile dementia. In these cases Bleuler and others felt that the organic process mobilizes latent functional disorders and caricatures pre-existing

features of the personality. In the light of the present paper one wonders if the causal relationship is as simple as that. There is no doubt that the affective element has an influence on the organic process. In our study on grief reactions in the aged we described a case of true senile psychosis in the organic sense which was suddenly precipitated by bereavement. Old age is the time of loss par excellence and it seemed to us that grief manifests itself during that phase under the most extraordinary guises.

The question of the influence of the affective element on the organic process presents itself also in Kral's observation on the older inmates of Theresienstadt concentration camp. Kral found there a surprisingly great number of organic psychoses and a comparatively small incidence of affective disorders, even of reactive depression. That this should be entirely due to malnutrition is not at all proved. From our observations on grief it seems quite possible that there is such a thing as organic cerebral deterioration under the impact of psychogenic factors.

From a psychoanalytical point of view it is noteworthy that features of anal regression (hoarding, parsimoniousness, paranoid suspicion) seem to be more frequently associated with organic cerebral disease than features of oral regression. Among our cases, the "oral," over-talkative patient, who shows an undue need for dependance, reassurance, medical prescription etc. seemed more intact in his organic cerebral function.

Dr. Williams' and Dr. Jaco's paper is most interesting as far as the social and cultural implications are concerned. I should like to ask whether the lower percentage of senile conditions among the Spanish-speaking population might not be due to the fact in Latin families invalid old people are kept at home longer and are not as readily hospitalized as in Anglo-American families. This is, at least the impression we had from our clinical experience. The same factor may enter into the difference between rural and urban population. In a rural civilization, old age means dignity and wisdom. The world literature, all the way from the Bible to Tolstoy, gives beautiful examples of that. To me it is almost symbolic that the first outstanding example of senile persons in a rural setting affected by unfavorable change is in the story of farmers who become uprooted in a technocratic society; I have here in mind the unforgettable image of the grandparents in John Steinbeck's "The Grapes of Wrath."

BEHAVIORAL CHANGES IN NONPSYCHOTIC VOLUNTEERS FOLLOWING THE ADMINISTRATION OF TARAXEIN, THE SUBSTANCE OBTAINED FROM SERUM OF SCHIZOPHRENIC PATIENTS¹

ROBERT G. HEATH, M.D.,² STEN MARTENS, M.D.,³ BYRON E. LEACH, Ph.D.,
MATTHEW COHEN, AND CHARLES A. FEIGLEY, M.D.

In previous presentations(1, 2) we have described the behavioral effects resulting from the administration of taraxein to human volunteers. In this report we will describe our results with a larger series of volunteers in which additional control experiments were conducted.³ Other studies which we have conducted in an effort to gain more understanding of the nature of this substance also will be presented.

We now have administered taraxein to 20 human volunteers: 15 were inmates of the Louisiana State Penitentiary at Angola; 3 were schizophrenic patients in remission; the other 2 were nonpsychotic volunteers other than the prison population. The nonpsychotics were screened and only those with a negative history of mental disease in themselves and their families were selected. In every study the dose administered was the amount of taraxein that could be extracted from 400 ml. of schizophrenic serum. The total amount of solution varied from 1½ to 5 mls. It was injected rapidly intravenously. To control effects of suggestion, all experiments were carried out as double-blind studies with several different control substances being used. Control injections included a fraction processed from normal serum by the same procedure employed for

extracting taraxein from schizophrenic serum, ceruloplasmin, normal saline and sodium amytal. In no instance did a volunteer react with psychotic symptoms to substances other than taraxein.

The clinical effects in this larger series were of the same nature as previously presented(1, 2). All subjects developed symptoms which have been described for schizophrenia. Primary or fundamental symptoms appeared consistently. Blocking and thought deprivation developed; all were autistic and complained of depersonalization. They appeared dazed with diminished contact to the environment; had a blank look in their eyes; and showed a lessening of animation in facial expression. These primary or fundamental symptoms appeared first. They were the most consistent and developed even with the administration of taraxein which had given minimal activity by animal assay. Each of the classical secondary symptoms appeared in one or more of the test subjects. The symptoms displayed have included catatonic stupor and excitement, hebephrenia, referential ideas, delusions of persecution, grandiosity and auditory hallucinations. None of the test group has displayed visual hallucinations or shown changes in autonomic nervous system so characteristic of the D-LSD-25 reaction. The reactions in the 3 schizophrenic subjects in remission have been slightly different from those with the nonpsychotic volunteers. One of the 3 was given a very active dose of taraxein. He developed a quite intense reaction which was much more prolonged than in the nonpsychotics, lasting 4 days instead of the usual 1 to 2 hours. The other schizophrenics in remission were each given a weak dose of taraxein. This dose had produced only very mild primary symptoms for a short period in a nonpsychotic volunteer. With the schizophrenics, however, it produced a defi-

¹ Read at the 113th annual meeting of The American Psychiatric Association, May 13-17, 1957, Chicago, Ill.

² Supported by grant-in-aid from The Commonwealth Fund.

³ From the Department of Psychiatry and Neurology, Tulane University School of Medicine, New Orleans 12, La.

⁴ Special Foreign Fellow—the Commonwealth Fund.

⁵ The authors wish to express appreciation to Warden Maurice H. Sigler of Louisiana State Penitentiary at Angola for making arrangements to conduct the experiments with human volunteers, and to all those inmates of the Penitentiary who volunteered for the experiments.

nite reaction with secondary symptoms, suggesting that remitted schizophrenics were more sensitive to taraxein than nonpsychotics. Since the symptoms displayed by individual volunteers have been described in some detail in earlier papers (1, 2), we shall not elaborate further on specific symptomatology.

Since our initial studies with taraxein we have pondered the problem as to whether the taraxein itself actually circulates in the serum of schizophrenic patients or whether schizophrenic serum contains a type of precursor or "taraxeinogen" which can be activated into taraxein by our processing procedure. Since we have never been able to extract taraxein from normal serum, it has been our concept that at least a precursor was present specifically in schizophrenics. To test this hypothesis, we injected rapidly 450 ml. of schizophrenic plasma (500 ml. of solution including citrate) on 4 occasions into each of 4 nonpsychotic prisoner volunteers. To control this study, the same amount of plasma obtained from nonpsychotic donors was injected at the same rate of speed into nonpsychotic prisoner volunteers. All subjects were in excellent physical condition and under the age of 25 years.

The plasma was obtained by utilizing the routine transfusion bottles with 50 ml. of citrate for each 450 ml. of blood. After centrifugation, the plasma was drawn off, sterile precautions being taken for each step in the procedure. Prior to the rapid injection, 500 ml. of blood were withdrawn from each of the volunteer recipients utilizing the Cutter blood drawing sets. For rapid injection of the plasma, the routine transfusion apparatus was used. The infusion of saline was first started through a #15 needle. This was then stopped and simultaneously the infusion of plasma begun. An auxiliary hand pump was attached to the bottle of plasma which made it possible to transfuse the 500 ml. of solution into the antecubital vein in less than 4 minutes. The actual time consumed for the volunteers to receive 500 milliliters of the schizophrenic plasma was $3\frac{1}{2}$ minutes, $3\frac{1}{2}$ minutes, 2 minutes and $2\frac{1}{2}$ minutes; for the normal plasma, 2 minutes and $3\frac{1}{2}$ minutes. The subjects were in a semi-sitting position, the body actually being

at approximately a 45 degree angle. Cuffs were placed on the thighs so that return circulation from the legs could be shut off as a precautionary measure. The cuffs, however, were not used since no observable jugular distension developed. Some physical symptoms resulted from this rapid injection. All 6 volunteers complained of at least a slight degree of constriction about the chest. Three of the 6 developed a marked bradycardia. The greatest dip in pulse rate was to 40 per minute. Two subjects complained of feeling faint. The physical symptoms subsided within a few seconds after completion of the transfusion.

The 4 volunteers receiving plasma from schizophrenics developed symptoms, described as characteristic of schizophrenia, which persisted for 15 to 45 minutes. The reactions were not intense. However, all showed lessening in facial animation; all described symptoms of depersonalization, blocking and thought depravation. One showed a mild degree of posturing. Although the reactions were quite mild without clear-cut secondary symptoms, they were all definite. The 2 subjects receiving plasma from nonpsychotic donors showed no mental aberrations.

There are several factors to consider in comparing these results with those obtained with the administration of the taraxein fraction. Even though the transfusions were extremely rapid, the time consumed was still much longer than that consumed in the injection of taraxein. Therefore, it seems likely that concentration in the blood would be considerably lower. On occasion we have administered slowly (consuming the amount of time taken for the transfusion) known active taraxein to a monkey and it has not produced the clinical and EEG effects characteristic of the rapid injection. It is obvious that the numerous steps involved in the processing of taraxein must be associated with some loss of the active substance. It is probable that the rapid injection of a small amount of substance is responsible for the more intense clinical reaction with the taraxein itself as compared with the plasma. The experiments suggest that the substance we have extracted and called taraxein is present in that form in serum. However, in view

of the more intense reaction with the taraxein concentrate, we are not absolutely certain that in addition to isolating a purer fraction we are not also activating a precursor with our processing procedure.

We have been interested in determining whether or not certain chemical compounds known to either induce or relieve psychotic symptoms might do so by acting on the taraxein fraction. We have conducted two studies to investigate this problem. The first study was previously reported and involved medical student volunteers to whom we administered D-LSD-25 in quantities sufficient to induce psychotic symptoms. In that experiment we drew blood before and at the peak of the LSD reaction and processed the serum for taraxein. We did not obtain taraxein from either batch. This suggested that the behavioral reactions induced by LSD were not associated with the same chemical mechanism as that present in endogenous schizophrenia. In the second study we conducted experiments to determine if Thorazine alters the taraxein activity. In this experiment we drew blood and processed the serum from patients who had been receiving significant doses of Thorazine over prolonged periods. Along with this, blood was similarly drawn, and the serum processed, from psychotic schizophrenic patients not on drug therapy. The two batches were processed alongside one another. When tested in monkeys with chronically implanted electrodes in the manner of our standard assay, the two batches were equally active. This experiment suggested that Thorazine does not act on taraxein in the serum.

SUMMARY

Our studies concerned with the clinical effects of the administration of taraxein, a protein isolated from the serum of schizophrenic patients and not obtained from normal serum through our processing procedure, are summarized. In addition, we reported studies which suggest that this substance apparently is present in whole serum and is not a product activated through our processing procedure. One study concerned with the attempt to isolate taraxein following the administration of D-LSD 25 and a study de-

scribing the isolation of taraxein from patients receiving Thorazine were described. These experiments suggested that the LSD psychoses do not result from the formation of taraxein in nonpsychotic volunteers and that Thorazine does not produce clinical improvement by destroying or reducing levels of taraxein.

BIBLIOGRAPHY

1. Heath, R. G., Leach, B. E., Martens, S., and Cohen, M.: Studies in Mind-Brain Relationships, Behavioral Changes with Administration of Taraxein, a Substance Extracted from Schizophrenic Serum. Read at the 112th annual meeting of The American Psychiatric Association, May, 1956, Chicago, Ill.
2. Heath, Robert G., Martens, S., Leach, Byron E., Cohen, Matthew, and Angel, Charles: *Amer. J. Psychiat.* 114: 1, 1957.

DISCUSSION

DOUGLAS D. BOND, M.D. (Cleveland, Ohio).—In the last few years, Dr. Heath and his group have provided a great stimulus to research into the biological causes of schizophrenia. Last year, Dr. Heath made a dramatic announcement that a protein fraction from the blood of schizophrenic patients produced psychotic behavior in non-psychotic subjects. This year, they have extended the number of their experiments and have added further controls. This paper reports the extension of the major findings from three to twenty-one subjects; purports to show that three schizophrenic patients in remission are unusually sensitive to their protein fraction, and that rapid transfusions of 500 cc of citrated plasma from schizophrenic patients to normal volunteers produce transient changes in behavior and thinking that the authors identify with schizophrenia.

A discussant of this work has a hard job; on the one hand, one can but admire the great energy, enthusiasm and hard work of this group; on the other hand, one cannot help but be critical of some of the form and content of these presentations. These presentations have been unstable for not reporting the method. For instance, in this paper no method for the extraction of taraxein is given, nor is any available reference quoted, only two unpublished papers. This to me is a serious error. Results and method should go together, if encouragement is to be given to open scientific inquiry.

Second, there seems to me to be a lack of desirable caution in the clinical reporting. Words long identified with chronic clinical syndromes are used as descriptive words for transient phenomena. Simple descriptions of the patients' behavior would have better conveyed the authors' meaning and not run the danger of putting conclusions into primary observations.

The most critical new work is the transfusion into non-psychotic volunteers of unprocessed plasma from schizophrenic patients. The authors clearly delineate method here, and open for others a simple way to test the hypothesis that a factor exists in the blood of schizophrenics which produces mental symptoms when transfused into normal subjects. Plasma from normal subjects did not produce such effects. The transfusions were very rapid and were made under pressure, because of the belief that the toxic substance would be quickly destroyed. The procedure is a heroic one and I for one, would be more content, were the number of positive results more than four, and the number of controls more than two. I would like to know also, which patients suffered the severe bradycardia and circulatory embarrassment reported. Were the controls the least or most affected in this way? The answer to this question might well change one's weighting of the evidence.

In summary, this work is provocative and stimulating, but the critical controls are yet to be done.

DISCUSSION

KATHLEEN SMITH, M.D. (St. Louis, Mo).—That elusive abnormal metabolite in schizophrenia has attracted most of us at one time or another. In the height of my enthusiasm two years ago I tried injecting 1000 cc. of whole blood from a mute waxy catatonic schizophrenic into a terminal cancer patient, but produced no mental symptoms. A method for concentrating the material seemed the next step.

The findings of Dr. Heath and his coworkers stimulated members of the department of psychiatry at Washington University School of Medicine in St. Louis to visit the New Orleans group and learn to prepare "taraxein." Enough material was prepared to inject 5 volunteer prisoners with "taraxein," 4 with extract from normal serum, and 8 with saline

placebo. Observations were by double blind technique and 4 subjects served as their own controls. None exhibited either the primary or secondary symptoms described by Bleuler.

In only 3 instances was any change noted, other than anxiety. A subject receiving saline reported that he felt a little different in the stomach, was warm about the eyes, and had an expanding feeling of warmth. When his arm was raised and placed in a cramped position, he maintained the posture for several minutes before, during and after the experiment, because he thought it "was part of the experiment." Several markedly cooperative prisoners showed this "pseudo-waxy-flexibility." The subject receiving normal serum extract held his arm aloft in a similar manner. Before injection he asked if we were doctors in training or real doctors and discussed his interest in hypnotism and Bridey Murphy. He compared the needle to a railroad spike. After injection he noted numbness in the chest, dizziness, lightheadedness, a floating feeling, and remarked that his steps seemed extra large and required no effort. The subject receiving extract from schizophrenic serum showed "pseudo-waxy-flexibility." At 1½ minutes after injection, he noticed the green paint on the wall. At 16 minutes he expressed disappointment that "nothing had happened." At 1½ hours he was concerned about how much he had talked to us, and said it was wise to keep a close mouth at prisons. He said that some prisoners in the hall were "bad ones." This reaction suggested paranoid content, but was discounted when we later found that another prisoner received twice the dose of the same "taraxein" that same day without any reaction whatsoever. These 3 examples hint at the difficulty in evaluating the responses obtained.

The prospect of finding an abnormal metabolite in schizophrenic serum is an exciting one and Dr. Heath is to be commended for his direct attack on the problem.

THE "DOUBLE BLIND" METHOD: ITS PITFALLS AND FALLACIES

WERNER TUTEUR, M.D.¹

With the advent of an ever increasing number of so-called tranquilizing drugs, this method has recently been used by clinical investigators to a degree that an assessment seems mandatory.

"Double blind" is a jargon expression which should be replaced by "controlled." The origin of the method and its first use are difficult to trace. It probably developed as a matter of course as the need for exactness and reliability in clinical investigations made itself felt. It has been subject to many variations. Hill(1) stated that uncontrolled studies may, through play of chance, give a favorable picture in the hands of one physician, and an unfavorable one in the hands of the second. Greiner, *et al.*(2) warn of the innate enthusiasm with which every investigator approaches a research project and interprets it. Thus medical journals "euphemistically called literature" may be cluttered up with conflicting reports(1).

While the purpose of the method is to test the efficacy of a given drug, unbeknown to patient, attending personnel and clinical investigator, on a homogenous group of patients showing similar symptoms, in reality there are two drugs under investigation, the compound to be tested and the placebo. The active compound is thus "compared" with the effects of an inert compound. At no time are the participants of the study to know which compound is being administered. This is usually performed with the help of a code system which lends itself to an infinite number of variants. Thus the illusion is maintained. Once the code is broken at the termination of the study, "objective" findings are expected to be forthcoming.

Greiner, *et al.*(2) stress the necessity of describing the symptoms which are expected to improve prior to the study and he selects his patients accordingly and homogeneously. These symptoms are also called by other investigators "target symptoms"(7). He states that the "double blind" method is not safe

from error and that the hazards are greater in the study of symptoms that are vague and not easily defined. Hill is aware of the difficulties in assessing X-rays. Should the result of a study be based on such findings, he admits that the final assessment of clinical findings of physical illness is still more difficult even with the "double blind" method. No doubt, were he to evaluate psychiatric illness and patients, he would face even greater difficulties, since measurement of psychiatric symptomatology remains inadequate and subject to individual interpretation. Yet judgment must be made without any possibility of bias, without any over-compensation for a possible bias, and without any possibility of accusation of possible bias. Hill considers this at times impossible(1).

Ethical concepts enter any clinical investigation, especially "double blind" studies. For obvious reasons one would not for weeks inject an inert solution into a patient's veins merely for the sake of comparison. Neither would one withhold a life saving active compound from a patient where even the slightest possibility of improvement with it is apparent. To have psychiatric patients continue uncontrolled toilet habits on placebos, have them act out in a destructive manner towards others, themselves and equipment while remedies for this behavior are available, is contrary to medical concepts. Such measures have become extremely demoralizing to patients and attending personnel in our experience, resulting in statements to the effect that the "drug" (placebo) was making the patients "worse." This observation no doubt may be true, considering the fact that while on placebos the patient is not receiving any pharmacological treatment(3, 4, 5, 6).

Greiner(2) stresses the absolute necessity that the compound under investigation and the placebo must have identical appearance and taste. The latter is of the greatest practical importance in disturbed psychiatric patients who will not or cannot swallow a given capsule and for whom it has to be dissolved

¹ Clinical Director, Elgin State Hospital, Elgin, Ill.; Clinical Associate, Stritch School of Medicine, Loyola University, Chicago, Ill.

in a liquid vehicle. Frequently placebos received for "double blind" studies do not comply with this latter requirement, resulting very soon in the fact that patients, regardless of their degree of disturbance, complain bitterly that the "sweet" medicine (placebo) was not helping them at all, in contrast to the "bitter" or "tasteless," which represented the active compound. A most carefully planned and most conscientiously carried out study may collapse under such circumstances. Attending personnel do their part in tasting every capsule or tablet given to them for distribution to patients by staging so-called "pill parties" (3, 4, 5, 6).

In a recent panel on "placebos" held at the University of Illinois (8), one of the participants (W. S. Wood) made the pertinent statement that side effects occurring during a study make the drug and placebo groups obvious, a statement which can be readily confirmed. There remains, of course, always the possibility that certain "side effects" may occur on placebos, when such symptoms as parkinsonism, jaundice or amenorrhea, to mention only a few, have an etiology entirely unconnected with the compounds under study. These are rare exceptions, whereas the revealing of the groups due to true side effects render the study almost worthless from the "double blind" angle. Spontaneous remissions occurring on placebos are frequently interpreted as "placebo reactions." For practical purposes the two are frequently indistinguishable.

Hill (1) postulates that even without the "double blind" controls an effective treatment will not fail to come to light. Retrospectively, he feels that long drawn out controlled studies, as they were performed after the introduction of such "winners" as penicillin, now appear pedantic. On the other hand, he concludes, and any experienced and conscientious investigator will agree with him, that the "statistically guided therapeutic trial" (double blind method) is *not* the *only* means of investigation, nor that it is the best way in advancing knowledge of therapeutics. It is recommended as *one* way, but not the universal one.

Our own comments restrict themselves to

a warning that even under the most careful "double blind" conditions the results of clinico-pharmaceutical studies may still be inaccurate and at times even misleading.

SUMMARY

A critical review of the so-called "double blind" study reveals pitfalls, fallacies and inadequacies of this method of investigation which in the past has created an unwarranted security in many investigators. The "worsening" of patients' conditions while on placebos is demoralizing to patients and personnel and the ethics of such a procedure in a patient who is in dire need of active treatment can be questioned. It is imperative that the compound under investigation and the placebo have identical appearance and taste, since even disturbed patients, in our experience, are able to differentiate the two drugs by it, thus jeopardizing the most carefully planned and conscientiously carried out project. Side effects occurring on the active compound reveal the identity of the active and inert drug group.

BIBLIOGRAPHY

1. Hill, A. Bradford: *The New England J. of Med.*, 247: 4, July 24, 1952.
2. Greiner, Theodore, *et al.*: *Am. J. Med.*, 9: 143, Aug. 1950.
3. Rudy, L., Costa, E., Rinaldi, F., Himwich, H. E., Tuteur, W., and Glotzer, J.: *Trifluopromazine in the Treatment of Psychiatric Patients*. To be published.
4. Rinaldi, F., Costa, E., Rudy, L., Himwich, H. E., Tuteur, W., and Glotzer, J.: *Trifluoperazine in the Treatment of Psychiatric Patients*. To be published.
5. Tuteur, Werner: *Abstract of Research Work Performed with Chlorpromazine and its Derivatives at Elgin State Hospital, Elgin, Illinois*. Read at the 2nd International Congress for Psychiatry, Zurich, Switzerland, Sept. 1st, 1957.
6. Tuteur, Werner: *Zur Megaphenfrage in den Vereinigten Staaten von Amerika mit besonderer Beruecksichtigung der Nachbehandlung entlassener Geisteskranker*. Read *ibid*.
7. Cole, J. O., and Bennett, I. F. *in* *Recommendations for Reporting Studies of Psychiatric Drugs*. Public Health Reports, Vol. 72, No. 7, July 1957.
8. Foley, E. F., *et al.*: *Ill. Med J.*, 112: 5, Nov. 1957.

CONTEMPORARY PSYCHIATRY IN PORTUGAL¹

HENRIQUE J. DE BARAHONA FERNANDES, M.D.²

I feel it is a great honour to speak at this meeting and on behalf of the Portuguese Society of Neurology and Psychiatry, I wish to pay a sincere tribute to the psychiatric progress in your country.

The possibilities of research in a country as small as Portugal are rather limited. Besides the results obtained by individual researches, we would like to contribute to the cooperation amongst psychiatrists of different countries with some points of view that facilitate mutual understanding.

Portugal is situated on the most occidental point of Europe, open to the Atlantic and every world contact. From olden times it has developed a spirit of human understanding between people of different countries and races. This position is shown in psychiatry by an accessibility to the most varied currents of research and by the attempt at a theoretical synthesis, directed to sound knowledge and to practical results. We maintain a close connection with traditional psychiatry of the countries of central Europe. We are however interested and openminded to the American dynamic and psychotherapeutic currents and to mental hygiene.

Our greatest contribution to modern psychiatry was the leucotomy, discovered by Egas Moniz in 1936. At the same time were developed in our country the shock treatments and the several methods of psychological treatment from occupational therapy to psychoanalysis. Our personal experience with these several methods led us to a structural analysis of mental diseases that tries to integrate the psychological and social dynamics on their neuro-physiological basis and heredobiological constitution.

Since the opening in Lisbon, in 1942, of the Julio de Matos Hospital, there has been an active effort to better hospital treatment, especially regarding no restraint, nursing, oc-

cupational treatment and social work. In 1945 a new law on mental diseases, made legal regulations for voluntary admission clinics for treatment of acute cases, out-patient services, and dispensaries of mental hygiene, etc.

The teaching of psychiatry in the Portuguese faculties of Medicine, began in 1911, and has been well developed with practical demonstrations, since 1955 together with lectures on psychology in the third medical year. In the university general hospitals there are psychiatric units for acute patients, neurosis and psychosomatic patients. The so-called "day hospital" and extrafamily nursing are under trial.

The interest in psychiatry has grown very much, since the war, in both students and doctors. Psychiatric careers have favourable conditions in private practice and the number of specialists has grown in the last 20 years from less than 20 to almost 100.

Since 1539 religious institutes for the care of mental patients have existed in Lisbon. The Portuguese Saint, João de Deus, in the 16th century, considered them sick people, and founded the humane basis of their treatment. In 1848 the first state hospital for mental patients was opened (Rilhafoles, now Hospital Bombarda) and since then psychiatrists have sought better conditions for the treatment of mental diseases. The 6 state hospitals and 15 private hospitals with 7,342 beds and 4,685 annual admissions, are insufficient for the 8 million population.

We do not have very different clinical problems from those of other European countries, still in the phase of industrialization. The human problems are conditioned by the Catholic tradition of the country, but in great cities there is a rapid development of new cultural trends and we are observing all the varieties of mental reactions.

Worthy of note is the high percentage of affective conditions (24.3% of admissions in Julio de Matos hospital) and symptomatic psychoses (6.5%) in somatic diseases. General paresis is decreasing especially in men (4.5%); senile psychosis is treated in charity asylums or in the home, this being

¹ Read at the 113th annual meeting of The American Psychiatric Association, Chicago, Ill., May 13-17, 1957.

² Professor of Psychiatry, Lisbon University. Address: Av. do Brazil, 53-A, Lisbon, Portugal.

due to the strong family ties. Though we are a wine producing country, alcoholic psychoses are not frequent but are increasing.

The interest for the personal case and its individual treatment led us not to put aside its reference to well defined nosological and clinical entities. We accept the classical distinction between psychopathic personalities, psychogenic and neuritic reactions, and mental diseases (psychoses). In psychosis with unknown etiology (constitutional psychosis) with diagnosis, intermediary to cyclothymia and schizophrenia, a clinical entity with a good prognosis—the cycloid psychosis of Kleist and Leonhard (that we propose to call holodisphrenia). They are acute syndromes (confusional, incoherent, akinetik and hyperkinetic, twilight, delirious, etc.), similar to the clinical pictures of toxic, organic and symptomatic psychosis and of epilepsy. After each attack there is total recovery and a tendency to periodic relapse. The symptoms with schizophrenic aspect manifest themselves on the basis of a global alteration of consciousness, and of the activity and formal structure of thought process. They have marked vegetative and metabolic symptoms and they respond very well to shock treatment and neuroplegics, though with oscillations and relapses. Its structural analysis made by Polonio shows a convergence of constitutional exogenic and psychogenic factors, different from schizophrenia.

We use a multi-dimensional clinical analysis that allows us to integrate biographic and social understanding with bio-organic and constitutional explanations.³ It has seemed to us ever since the introduction of the new physical treatments, that their incidence in the development of illness could give us a better knowledge of its structure.

With our collaborators Polonio, Sousa Gomes, we studied the therapeutic effect of ECT, insulin treatment and especially leucotomy. Already in 1944, such an analysis demonstrated that the therapeutic action of physical methods and leucotomy seems to have no bearing on the aetiological causes of the psychosis. The same factors of favourable or unfavourable prognosis for

spontaneous evolution, such as environment, constitution, personality, the acute or insidious onset, the tendency to recovery, fluctuations or progressive deterioration have the same importance in the case of therapeutic recovery.

They are effective on the nonspecific symptoms of several nosological entities. Schizophrenic deterioration as well as the tendency to the periodic development of manic-depressive psychosis are not materially affected by them.

In a study by Polonio of 250 patients treated by insulin compared with 250 controls, it could be seen that the action of insulin is predominantly somatic, increasing powers of bodily resistance to the disease in a way similar to the protective action of pyknic body build against the predisposition to schizophrenia. Syntonic personalities with good emotional tension do best on all these methods of treatment. The action of leucotomy depends largely on the patient's personality and the degree of preservation.

In other studies on structural analysis of mental diseases done in our clinic it could be seen that the favourable or unfavourable development of psychosis depends on the several constitutional and exogenic factors. It could be seen that in schizophrenia, manic-depressive, cycloid and puerperal psychosis, psychogenic factors have not the outstanding pathogenic role that is now so frequently ascribed to them. In exogenic psychosis, constitutional factors are also active, in a way similar to their effect on endogenous psychosis. For instance, Mendes, in 507 cases of exogenous psychosis, found a positive family history of mental disease in 46.9% of the patients.

Such clinical experience has led us to a particular type of treatment. Let us take as example leucotomy: the surgical operation by itself is not enough, it is necessary to follow it with rehabilitation and psychotherapy. As we have shown in the first International Psychiatric Congress in Paris, leucotomy determines a regressive behaviour and a syntonization with environment. We established a relationship of the altered fronto-orbitothalamic integrations and the interoceptive activity of personality (regres-

³ In the field of child psychiatry we refer to the research of V. Fontes, Y. Santos, and in other areas to L. Pina, D. Furtado, S. Diniz, L. Sociro *et al.*

tion) and better cortical integration of exteroceptive activity (syntonization).

The decrease of inner tension and increased extraversion facilitate rapport with the doctor and interpersonal relations. Psychosurgery creates, in this way, a new basis of transference for psychotherapy and rehabilitation. The same happens with electroshock and insulin treatment which allows better rapport and psychotherapy. We have also observed this in the acetylcholin treatment of obsessive and anxiety neuroses.

The vagal crises with vaso-dilatation and anxiety, due to the acetylcholin shock, creates a biodynamic situation that conditions new interpersonal relations between the patient and the doctor. This situation makes for an easier actual and consecutive psychotherapy. We propose to call this mechanism *vital transference*. It is an application of psychoanalytic concepts to a situation with biological basis. The physical treatments change the cerebral function and behaviour reactions in a way that makes for a transfer of the patient's affect to the doctor—the basis of every psychological and educative action. Vital transference acts at a deeper level (biologically) than the transference of psychotherapy. It is the instinctive-affective level called *vital* that includes the basic functions of personality and not psychogenic and reactive structures. It is set in motion by physical effects (syntonization actions and others) due to treatments (surgical treatment, shock, drugs, etc.) and not to symbolic values.

Vital transference is referred to the *actual* therapeutic situation; it may be a basis for suggestive support and educative treatment. With the sequence of treatment made easier, *par example*, by the biological regression due to leucotomy, the vital transference may assume a symbolic meaning in relation to the childhood life. It may then make for an easier application of psychotherapy.

The recent introduction of neuroplegics and tranquilizers, places this problem in an acute form. We will not discuss it now, only to say that there is no reason for any supremacy fight between pharmacotherapy

and psychotherapy. We do feel these drugs should be used in conjunction with the psychological education and social orientation of the patient.

Our experience shows that their tranquilizing effect can be pleasant or unpleasant and it facilitates either negative or positive transference. The pharmacological action has therefore to be amplified to the psychological and social level. And also, if I may be allowed to add, at the spiritual level—the sense of existence given to life of the individual.

These brief indications suggest that Portuguese psychiatrists seem to approach psychiatric problems in a global perspective. We refuse however, to extrapolate the meaning and the results of a single theory or of a single method of research. None of the actual psychiatric currents, psychoanalytic, cybernetic, reflexological, behaviourist, phenomenological, existentialist or any other is preponderant with us. We attempt to understand integral man structured in the different levels and categories of the real (N. Hartmann).

Research has to be partial and analytic. We must not, however, forget each other level and structure nor lose reference to the totality.

We would like to collaborate with great countries such as the U.S.A., in the *synthesis* of the several branches of research; at least, as we have proposed since 1936, in the "convergence" of cerebral anatomophysiology and psychopathology in the structural analysis of psychosis and treatment results, under a multiple approach—constitutional, biological, psychodynamic and cultural.

Besides clinical psychiatry, the possibilities of research in Portugal are scarce. The "Centro de Estudos Egas Moniz" seeks to enlarge the basis of research in neurology and psychiatry in the directions referred to; that is to use many of the available methods of scientific research for a better knowledge of healthy and ill men, on the basis of natural science, integrated in a medical humanistic anthropology.

A NOTE ON PSYCHIATRIC DEVELOPMENTS IN THE SAN FRANCISCO BAY AREA

PORTIA BELL HUME, M. D.¹

INTRODUCTION

During the past twenty years, since The American Psychiatric Association last met in San Francisco, there have been four major developments affecting psychiatric services and facilities throughout the State, particularly in the Bay Area. These developments are closely inter-related and comprise (a) the unprecedented increase since World War II in the number of psychiatrists practising in California; (b) the expansion of training and research facilities; (c) the improved state programs within the mental hospitals, along with the establishment of extramural services; and (d) the development of local mental health services through the National Mental Health Act of 1946 and through California's Community Mental Health Services Act of 1957 (known as the Short-Doyle Act) which provides state aid to cities and counties.

Many of the developments to be briefly described in this paper were foreshadowed on the occasion of the 1938 annual meeting in San Francisco, when Dr. Margaret H. Smyth, then Superintendent of the Stockton State Hospital and recently deceased, wrote in the March, 1938 issue of the *JOURNAL* as follows, when expressing her prophetic concept of a state hospital program:

... The hospital at Stockton carries on a definite program of distributing mental hygiene information in the way of out-patient clinics, parole clinics, juvenile court and child guidance examinations. In all these extra-mural activities is stressed the concept of mental hygiene which seeks to build up sound mental health, prevent and cure mental disease. ... The out-patient clinics for the patients who are home on parole are held in six counties where the patients are invited to meet at the health center in densely populated districts. Two clinics are held in each county annually. The counties other than San Joaquin which are served in this manner are San Francisco, Alameda, Stanislaus, Fresno and Sacramento counties. Patients from adjacent counties are invited also to attend these

clinics and often they come from great distances, as much as one hundred miles in some cases. The mental hygiene clinic is not only a great blessing to the community but also presents an opportunity for the superintendent and medical staff of the hospital to be brought in contact with early personality changes and beginning mental disorders for which prevention and early treatment are possible . . . (1)

PSYCHIATRISTS IN THE BAY AREA

In 1957, 11% of the membership of The American Psychiatric Association were found to be practising in California as compared with 100 members in 1943 and with 712 in 1952(2). Out of a total California membership of 1,066 in 1957, there were 277 from the Bay Area and 60 from San Francisco alone. In the East Bay area, which includes the cities of Oakland, Berkeley, Richmond, and Alameda, there were no more than 6 psychiatrists two decades ago; there are now close to a hundred psychiatrists in the two East Bay counties of Alameda and Contra Costa(3).

The Northern California Psychiatric Society, established in 1954 as one of three district branches of The American Psychiatric Association in California, superseded the older Northern California Society for Neurology and Psychiatry, and enjoys a membership from all of the coastal counties in the northern half of the State. Another very active group of psychiatrists was organized five years ago; the East Bay Psychiatric Association with over 75 members is an affiliate of The American Psychiatric Association.

TRAINING AND RESEARCH

San Francisco has been fortunate in being the locale of the great medical schools belonging to Stanford University and the University of California. During the past two decades, their psychiatric departments have increasingly provided training facilities for medical students, psychiatric residents, psychiatric social workers, and clinical psychologists. Collaborative arrangements with

¹ Associate clinical professor of psychiatry, University of California Medical School, San Francisco; deputy director for community services, State Department of Mental Hygiene, Sacramento.

of nursing and colleges offering curriculum in occupational and recreational therapy have enabled the two medical centers to offer specialized training to the ancillary professions as well.

On April 5, 1941, the cornerstone of the Langley Porter Clinic was laid by the Governor on land made available by the University of California at its Medical Center in San Francisco. It was the California Legislature's intention "to provide opportunity for the State and the University to cooperate in prevention, diagnosis, treatment, and promotion of research in the field of mental disorder and advancement of the learning and knowledge of the students of the University. . . ." The Director of the Department of Institutions at that time was Dr. Aaron J. Rosanoff, who was the first psychiatrist to head California's mental hospital system, and who worked tirelessly for several years to persuade the Governor and the Legislature to approve the project. Dr. Rosanoff was characterized as "a social minded, scientifically trained physician, . . . whose contributions to psychiatric literature and whose teaching in psychiatry" placed him foremost in the opinion of the Dean of the Medical School, Dr. Langley Porter, who had aided and abetted the entire plan from the start, and who had obtained from Surgeon General Parran the assignment of Dr. Walter Treadway to the University. Dr. Treadway's experience in building and organizing psychiatric hospitals for the United States Public Health Service made his help invaluable during the planning stages, 1940-41. Before the actual opening in 1943 of the 100-bed hospital, now officially known as the Langley Porter Neuropsychiatric Institute, Dr. Karl M. Bowman was engaged to become its medical director and to accept the appointment of Professor of Psychiatry at the University of California Medical School. Dr. Bowman had 18 months in which to recruit his staff and to initiate the training and research programs under exceedingly difficult, war-time conditions before the actual opening. Dr. Rosanoff was prevented by a fatal illness, from which he died a few weeks later, from attending the opening ceremonies in April, 1943. The large outpatient department,

which developed a case-load of 750 patients during its first year, was promptly named for him. Dr. Porter, now retired, has remained actively interested in the facility which bears his name and, not long ago, addressed the staff at one of its regular weekly conferences. Dr. Treadway, also retired and living in Santa Barbara, has been an active member of the California Advisory Committee on Mental Health ever since it was first created by Governor Earl Warren in 1951.

The opening of the Langley Porter Neuropsychiatric Institute signalized a unique working arrangement between the State Department of Institutions (since 1945, the State Department of Mental Hygiene) and the University of California. It resulted in the launching of state-supported, full-scale programs of research, training, and outpatient services in the field of psychiatry, which eventually extended beyond the confines of the Langley Porter "clinic" and reached into the state hospitals. Research projects were undertaken by the hospitals, first in collaboration with the Langley Porter Neuropsychiatric Institute, and eventually on their own initiative. By 1956, these projects had become sufficiently numerous and important to warrant the creation of the position for a chief of research to organize and expand the research program within the Department of Mental Hygiene. The Legislature is now considering a similar development in the area of training. The state hospitals and clinics within striking distance of San Francisco have thus been drawn into the orbit of training and research centering in the San Francisco Bay Area.

The San Francisco County Hospital, long used as a training facility for junior students from both medical schools, opened a psychiatric wing in 1938 to replace its crowded detention wards and to implement a training program for psychiatric residents from both universities. Shortly thereafter, under the direction of Dr. Jacob Kasanin, the Mt. Zion Hospital initiated a psychiatric program for residents, and established an outpatient clinic which is now directed by Dr. Norman Reider. Training at the clinic in both adult and child psychiatry is provided, not only for psychiatric residents, but

also for psychiatric social workers in affiliation with the School of Social Work at the University of California in Berkeley. Mt. Zion's psychiatric residents may spend a year on the San Francisco County Hospital's psychiatric service.

The events in Europe which led up to World War II resulted in the emigration to California of a small number of distinguished psychoanalysts, who formed the nucleus of a training center for psychoanalysis in San Francisco. At first, this center operated as a branch of the Topeka Psychoanalytic Institute, and it was officially recognized by the American Psychoanalytic Association in 1948 as the San Francisco Psychoanalytic Institute. Its branches in Los Angeles and Seattle have subsequently been given the status of independent institutes.

During the 'forties, several Bay Area hospitals and clinics either expanded or established training programs for psychiatric residents, psychiatric social work students, and clinical psychology trainees. The V.A. hospitals at Palo Alto and at Fort Miley, along with the mental hygiene clinics for veterans in Oakland and San Francisco, strengthened their teaching staffs. The Children's Hospital in San Francisco established a full-fledged child guidance clinic, which developed into a training facility for child psychiatry.

In the East Bay, Herrick Memorial Hospital in Berkeley opened a psychiatric ward less than ten years ago. This inpatient and outpatient service in a private, general hospital has been recently expanded and now occupies a newly built wing. The psychiatric residents are trained there by staff-members, some of whom are also on the teaching staffs of Mt. Zion Hospital and the Langley Porter Neuropsychiatric Institute.

At the present writing, plans are being implemented for the moving of the Stanford Medical School from San Francisco to the University's campus in Palo Alto. At this new medical center, facilities for a greatly expanded training program will include a thousand-bed general hospital under the Veterans Administration that will provide over 600 psychiatric beds for teaching purposes. Stanford's center for advanced studies in the field of the social sciences has recently been

established at Palo Alto, and research that often touches upon psychiatry is already under way there.

STATE PROGRAMS

State-wide services currently operated by the State Department of Mental Hygiene represent a spectacular transition during the past twenty years from an institutional type of custodial care for the mentally ill to the use of many different kinds of treatment within the hospitals, along with rehabilitation services to patients on convalescent leave from the state hospitals, pre-admission and follow-up clinics at the hospitals, all-purpose mental hygiene clinics, mental health educational and informational services, two neuropsychiatric institutes located at the University of California in San Francisco and Los Angeles, and organized research and training programs within the state hospitals and clinics. The Department now has over 15,000 employees and an annual budget of about 100 million dollars. Several events marked the period of transition and brought about certain psychiatric developments in the area of San Francisco, as well as elsewhere throughout the State.

In 1938, the Legislature authorized a program to help patients in the state hospitals to return to community life, through follow-up medical review of patients on trial-leave, and through the establishment of bureaus of social work (now numbering 18) in the patients' home communities. At large regional offices in San Francisco and Oakland, trained psychiatric social workers are thus available, for purposes of social rehabilitation, to patients who have been previously hospitalized at Agnew, Napa, Sonoma, Mendocino, and Stockton State Hospitals. In collaboration with the state hospitals and clinics, with the State Bureau of Vocational Rehabilitation, with local health and welfare agencies, and with volunteer organizations, the bureaus of social work are able to offer a variety of psychiatric rehabilitation services, including the provision of foster homes. There are currently over 9,000 patients on convalescent leave who receive these services in all of California's 58 counties.

The period of most rapid progress in the development of state hospital services began after World War II. Until then, the wartime shortages of both personnel and building materials precluded any substantial additions in this program, particularly in the face of the unforeseen, continuing, and staggering growth of the general population in this State. The admission rate has remained steady since 1950 but, though the general population goes on increasing at the rate of 1,000 persons a day, an increasingly high rate of discharge resulted in fewer hospitalized patients on June 30, 1957 than there were on July 1, 1956. Many factors are undoubtedly responsible for this state of affairs, but more and better techniques of treatment and rehabilitation within the state hospitals played the most important part.

The establishment of the first and still the largest, state-supported outpatient clinic at the Langley Porter Neuropsychiatric Institute was followed, between 1946 and 1950, by Legislative authorization for 7 state mental hygiene clinics in Los Angeles, San Diego, Fresno, Sacramento, Berkeley, Riverside, and Chico. The Berkeley clinic, across the Bay from San Francisco and financed entirely by federal grant-in-aid funds through the National Mental Health Act, opened in 1948 as a branch of the Langley Porter Clinic for training purposes. Located on the campus of the University of California at Berkeley, this clinic has been affiliated as a field training center with three departments of the University: psychiatry, psychology, and the School of Social Welfare. The Berkeley Clinic has also provided training in outpatient psychiatry to residents from the V.A. training hospital in Palo Alto and, for a time, from the U. S. Army's Letterman General Hospital in San Francisco. It is noteworthy that, among its graduates, this clinic counts the superintendent and medical director of a state hospital for the mentally retarded, the director of the largest outpatient psychiatric clinic in the State, and the psychiatrist who heads the mental health program in the State Department of Public Health. Since 1956, two United States Public Health Service fellows in community psychiatry have been trained each year at the

Berkeley clinic, thus initiating a new and on-going program that is rare in California and elsewhere: residency training programs have generally concentrated on clinical psychiatry, and a curriculum in community psychiatry accompanied by supervised field experience in community mental health services of a non-clinical nature is practically unknown. This pilot training program at Berkeley, therefore, represents the latest organized attempt to teach in California the special skills required of psychiatrists as mental health educators or consultants in community programs promoting mental health.

All of the state mental hygiene clinics, in addition to providing direct services to patients, also offer services to their communities of an informational, educational, and consultative nature. Out of its central office in Sacramento, the Department of Mental Hygiene initiated in 1950 a public information and education program, employing the usual mass media of communication, maintaining libraries of pamphlets and films on mental health, and publishing special brochures as well as monthly news bulletins. In 1952, there were established in both San Francisco and Los Angeles information centers whose purpose is to promote the effective use of both state and local resources for the mentally retarded.

LOCAL MENTAL HEALTH SERVICES

During the eleven years following the passage of the National Mental Health Act in 1946, the federal grant-in-aid program was administered for the first five years by the State Department of Public Health and, since 1951, by the State Department of Mental Hygiene. Between 1947 and 1957, national mental health funds were allocated to local agencies in 25 of California's most populated counties, thus extending community mental health services to 90 percent of the state population. California now has a total of 65 non-profit, psychiatric outpatient clinics. Twenty-seven (42%) of them were started with the aid of federal funds, and 9 of them are in the San Francisco Bay Area alone. The Children's Hospital child guidance clinic in San Francisco and the

child guidance services in the Children's Hospital of the East Bay in Oakland are used for training in child psychiatry and pediatrics, respectively.

In Oakland, these funds have contributed to the support of the East Bay Activity Center, where rehabilitation services of a psychiatric and educational nature for mentally ill children have already returned to the public schools 12 out of the first 30 children treated there. Health Departments, schools, and welfare agencies in the Bay counties of Contra Costa, Alameda, and San Francisco have all received through federal funds the benefits of mental health services of an educational or consultative nature(4).

The federal grant-in-aid for hospital construction under the Hill-Burton Act has given impetus to the building of facilities for psychiatric patients in a number of general hospitals, both public and private, throughout California. In the Bay Area there are now 7 general hospitals with psychiatric treatment programs for inpatients, viz. San Francisco, San Mateo, and Contra Costa County Hospitals; Herrick Hospital in Berkeley; Stanford University Hospital, Fort Miley V.A. Hospital, and the St. Francis Hospital, all in San Francisco.

At the 1957 session of the State Legislature, the Short-Doyle Act for Community Mental Health Services was passed almost unanimously. This measure was drafted and actively supported by the three district branches of The American Psychiatric Association in California, in close cooperation with the California Medical Association. The Act became law on September 11, 1957.

The Community Mental Health Services Act authorizes cities and counties to establish, at their option, two or more of five kinds of mental health services: inpatient, outpatient, and rehabilitative services to individual patients; educational and consultative services to health, educational, and welfare agencies. The Act also carries a financial reimbursement from the State to the extent of 50% of the budgets for the locally operated programs(5). In its general provisions the California Act is thus very similar to New York's Community Mental Health Services Act.

Both the need and the readiness of the local governing bodies to use the Act were immediately apparent when 12 cities and counties, representing 62% of the population of the entire state, took official steps within the first month (December, 1957) to establish local mental health services in accordance with the new law. The four Bay Area counties of San Francisco, San Mateo, Contra Costa, and Santa Clara, as well as the city of San Jose have all appointed their local mental health directors. In San Mateo County, for example, under the administration of the health officer who is also the medical administrator of the county hospital, all five mental health services for which the Act provides are receiving financial aid from the State, beginning on January 1, 1958.

It is of considerable interest that, in all of the first 12 cities and counties to come into this new program, the value of local mental health services was demonstrated by their originally being established with federal grant-in-aid funds. The chief purpose of the Short-Doyle Act is to encourage the treatment of the patient in his home community in close proximity to the family physician, the local general hospital and the other agencies in the community that play a part in the prevention or alleviation of psychiatric disorders, including mental retardation. One corollary of such a purpose is the closer collaboration of the psychiatric specialist with the rest of the medical profession.

BIBLIOGRAPHY

1. Smyth, M. H.: *Am. Jour. Psychiat.*, 94:5, March, 1938.
2. Bowman, K. M.: Personal communications to the author. Jan., 1957.
3. Bulletin of the Alameda-Contra Costa Medical Association: ACCMA Membership Analysis, August, 1957.
4. Hume, P. B.: *Federal Aid for Community Mental Health Services: a Review of the 10-year Program in California* (read at the Western Divisional meeting of the American Psychiatric Association at Los Angeles, November 22, 1957).
5. Hume, P. P.: *The Short-Doyle Act for Community Mental Health Services*. California State Department of Mental Hygiene, Sacramento, 1957.

COLOR CHART FOR RAPID URINARY TEST

CHLORPROMAZINE (THORAZINE):



+

Daily
Dose: 100-300 mg



++

350-550 mg



+++

600-850 mg



++++

900 mg & over

PROMAZINE (SPARINE) AND MEPAZINE (PACATAL):



+

Daily
Dose: 100-300 mg



++

350-550 mg



+++

600-850 mg



++++

CLINICAL NOTES

A RAPID URINARY TEST FOR CHLORPROMAZINE, PROMAZINE AND PACATAL: A SUPPLEMENTARY REPORT

FRED M. FORREST, M.D., IRENE S. FORREST, PH.D., AND AARON S. MASON, M.D.¹

In a previous communication² a rapid test for the detection of phenothiazine derived drugs was described. On the basis of more than 1,000 urines tested, some practical conclusions can be reported at this time. It was found that approximately 5% of all mental patients on oral drug therapy, both from open and closed wards, were able to deceive the nursing personnel by failing to swallow part or all of the prescribed tranquilizing drugs. Therefore, the test served the triple purpose of objectively evaluating the actual drug intake, to track down and correct the number of apparent "drug refractory" cases, and detect and eliminate waste in the drug budget entailing considerable economic losses.³

To facilitate interpretation and standardization of the test, a color chart was prepared. In assembling the statistical data, the specific weight of the urines, their pH, the patient's body weight, and time of collection of specimens in relation to drug intake were considered. To define the 4 levels of color intensity as represented in the chart, the "average reaction" for each level of the color chart was established on the basis of the urinary reactions of 50 patients per drug and dosage. Each "+" in the color chart thus corresponds to an increase of 300 mg of drug. The chart was devised to be

used in conjunction with the following test solution: 4 parts of 10% sulfuric acid with 1 part of 5% ferric chloride solution.⁴

Equal volumes of urine and test solution (e.g., 1 ml each) are mixed in a test tube. The resulting color is read at once against the chart, since oxido-reduction processes⁵ will modify the color on standing.

Individual Excretion Factor: 98% of the tests performed yielded congruent results within the range determined as "average" for the respective dosage level. Only 2% of the specimens tested deviated from the average reactions by showing color reactions either too pale or too intensive in relation to drug intake. In most of these deviant reactions the findings were consistent and reproducible, leaving the question of "individual excretion factor" open to further investigation. In our hospital, a patient's individual excretion factor (XF) is made a part of his medical record. Thus, a patient on a daily maintenance dose of 400 mg of drug, showing a urinary color intensity of "++" during his hospitalization, is expected to show the same excretion factor (XF++) on periodic return visits.

In no case was the color test negative, after an amount of 50 mg of drug or more had been ingested. We have not seen any false positive or negative test results.

Possible Factors of Interference: In more than 1,000 specimens tested, we have not encountered any interference with the uri-

¹ Respectively Staff Psychiatrist, Research Biochemist, and Director, Professional Services, VA Hosp., Brockton, Mass.

² Forrest, F. M., and Forrest, I. S. *Am. J. Psychiat.* 113: 931-932 (1957).

³ This 5% rate of waste, confirmed by spot tests in other hospitals, represents an annual 5 to 6 figure amount for each of the major hospital organizations, such as the VA or N. Y. State Hospitals, spending millions of dollars per year on chlorpromazine and other phenothiazine derived drugs.

⁴ In our original publication² a test solution consisting of equal volumes of sulfuric acid and ferric chloride had been specified. It was subsequently found that the 4:1 mixture establishes a pH of 1 or less, i.e. an acidity at which no interference by aspirin containing drugs is possible, and is therefore preferable.

⁵ Some aspects regarding the chemical basis of the test were previously reported.²

nary color test by non-phenothiazine derived drugs. Thus, neither reserpine, nor meprobamate, barbiturates, other sedatives, niacin etc. affected the color tests. Mixtures of phenothiazine drugs, however, can not be properly interpreted since the individual drugs produce various shades of color, from orange to purple.

Substantial amounts of ascorbic acid or other reducing agents may modify the test colors towards greenish shades. In these rare cases, observed after high therapeutic dosages of multivitamins, a small additional volume of test solution will restore the usual test colors as represented in the chart.

Specific weight of urines: Variations in urinary density within wide limits do not affect the test results appreciably, except

when fluid intake was excessive (3 quarts or more per day).

Effects of pH and body weight: Neither the urinary pH, nor the ratio of drug dosage per body weight seemed to affect the test results within the limits of accuracy obtainable by this method.

The route of administration, oral or parenteral, did not affect the test results. Even a single dose of a phenothiazine drug is eliminated over a period of several days—a high dose, for instance, being frequently demonstrable by this method for more than 8 days—and it is impossible to decide, whether a “++” reaction is due to a recently ingested dose of 300 to 600 mg of drug, or a dose exceeding 800 mg several days before.

AN ACCEPTABLE NONBARBITURATE SEDATIVE AND HYPNOTIC FOR MENTAL PATIENTS IN A STATE INSTITUTION

MARIANNE W. CHERMAK, M. D.¹

In looking for a sedative and hypnotic drug which does not involve easy respiratory depression, habituation or toxicity, we found that Doriden² has a great margin of safety in mentally disturbed patients.

Doriden is an alpha-ethyl-alpha-phenylglutathimide, which is used as a sedative in smaller doses (0.25 gr.) and as a hypnotic in larger (0.5 gr.) doses.

Eighty-five female patients were selected who presented difficult behavior problems and chronically disturbed combative or noisy and restless manifestations. Their ages varied from 33 to 77 years, the majority being between 40 and 65 years of age. All had been in the institution for a number of years. There were 3 groups: 61 patients with schizophrenic reaction; 10 patients were mental defectives with psychotic or behavioral reactions; 15 patients had epileptiform seizures, due to idiopathic epilepsy or

due to organic brain disease of various etiology.

Doriden was used in relatively small doses in the majority of cases: 250 mg. t.i.d. was sufficient for most patients to improve the behavior pattern. The epileptic group received 250 mg. once or twice daily in addition to the former medication mentioned previously.

In a few cases belonging to the schizophrenic group, the dosage of Doriden was increased while in others it had to be decreased by one dosage because of some drowsiness.

A bi-weekly check was made on the ward, with the ward physician and personnel keeping close watch. The drug was given daily for a period of 6 weeks.

Before the study had progressed very long, Doriden had to be discontinued in 28 patients because of their refusal to take the medication; the drug was discontinued with 11 patients who complained of dizziness and headache, while in 9 patients Doriden was discontinued because they developed a skin rash. It is interesting to note that some of these patients also had allergic reactions

¹ Clinical Director, Manteno State Hosp., Manteno, Ill.

² The Doriden in this study was supplied through the courtesy of Dr. F. J. Vinci, Ciba Pharmaceutical Products, Inc.

after the intake of other drugs. (No follow-up studies were done to see if with the reinstitution of Doriden the same patients developed a rash.) In view of this we were unable to ascertain that all the rashes were directly attributable to Doriden. Out of the 57 remaining patients, 37 (65%) showed very definite improvement and two more impressively improved. Eighteen showed no appreciable change and one (an epileptic) was a little worse from the behavioral standpoint. As a result of the administration of Doriden, we noticed that the enthusiasm on the part of the nursing personnel had been

favorably affected. Several attendants asked us to put more cases on the drug, furnished more names, and felt that the caretaking of the wards had become much easier, indicating that the drug had a general over-all beneficial effect on the patients under their nursing care.

Considering that almost 65% of the patients receiving small doses of Doriden showed improvement (they were more alert, less destructive or combative, and hallucinated less), it should encourage others to try this drug on a larger scale in mental institutions.

A CLINICAL TRIAL OF MARSILID IN PSYCHOTIC DEPRESSED PATIENTS

ANTONIO J. DELIZ FERREIRA, M.D., AND HARRY FREEMAN, M.D.¹

The present note deals with results obtained in a clinical study on 11 female psychotic patients with evidences of severe depression, treated with iproniazid (Marsilid). In previous papers, Loomer, Saunders and Kline(1) administered the drug to 17 chronic, female institutionalized patients over a period of 5 months with "appreciable" effects in 4 and "some response" in 7. Ayd(2) treated 50 depressed patients with Marsilid over a period of 3 months and found marked improvement in 5 and partial improvement in 19.

The patients in this study had an average age of 36.6 years (range, 29-60 years), and an average period of hospitalization of 1.3 years (range, 8 months-7 years). Seven of the patients were schizophrenic and the other 4 were "pure" depressions. All patients had been on closed wards and had had ECT treatment previously with no effect.

The dose varied from 100-200 mg. daily, the average being 150 mg. Nine patients took the drug for three months and two for two months. In one patient the dose had

to be reduced to 50 mg. daily because of the appearance of an ataxic gait.

The patients were interviewed at bi-weekly intervals and rated by means of a modified form of the Malamud Sands rating scale(3) to determine quantitatively the items of behavior which might be affected.

Following the administration of the drug, one patient went home on visit and 3 improved enough to be transferred to open wards. Five others showed some lessening of the depressive features but not enough to alter their ward status. Two showed no change.

On the basis of the scores, the greater part of the improvement was shown within the first month. The scores also decreased in the direction of improvement by one-third. Analysis of the changes in individual items of behavior showed an improvement in motor activity, mimetic expression, responsiveness, socialization, attention, speech, mood, feeling and perception. Hostility, on the other hand, was slightly increased. In the items of thought processes, the trend showed a shift from obsessive ideas, somatic delusions and despairing self-blame to illogical thinking, ideas of inference and shifting of blame. From this point of view, the drug altered the type of thinking, but not necessarily in a beneficial manner, toward a

¹ From the Dementia Praecox Research Project, Worcester State Hospital, Worcester, Mass., aided by a Ford Foundation Grant to the Worcester Foundation for Experimental Biology, Shrewsbury, Mass.

"achizoid" type of ideational content. Whether this was due to the fact that the majority of the patients were schizophrenic can be determined only by using the drug in a sufficiently large number of non-schizophrenic depressions.

RIBLIOGRAPHY

1. Loomer, H. P., Saunders, J. C., and Kline, N. S.: Iproniazid, an amine oxidase inhibitor, as an example of a psychic energizer. (In press.)
2. Ayd, F. J.: *Am. J. Psychiat.*, 114: 450, 1957
3. Malamud, W., and Sands, S. L.: *Am. J. Psychiat.*, 104: 231, 1947.

SEIZURES DURING THERAPY WITH PHENOTHIAZINE DERIVATIVES

DOUGALD D. McLEAN, M.D.¹; HAROLD R. MARTIN, M.D.²; ROBERT J. ELLINGSON, Ph.D.³; AND JACKSON A. SMITH, M.D.⁴

This report⁵ describes three approaches in the evaluation of seizures occurring during the administration of promazine, which include: a detailed electroencephalographic study of one patient, an appraisal of 10 others who had seizures while receiving the drug, and a control and treatment study of the electroencephalograms of 24 patients receiving promazine who did not show seizures.

The detailed study was of an 18-year-old male schizophrenic whose past history included no serious physical illness, head injuries or neurological disorder. A complete work-up revealed no abnormalities.

The patient was started on promazine in doses of 300 mgm. daily, which was increased to a 1200 mgm. daily dose in a 10-day period, resulting in a typical grand mal seizure. Promazine was discontinued and an EEG was taken within 24 hours after the seizure, which was reported as normal.

Three days after the first seizure, promazine therapy was restarted at a dosage of 600 mgm. daily and increased to a maximum dose of 1600 mgm. per day during a 3-week interval. A second EEG taken during this period showed no abnormalities. On the 25th day of the second course of promazine, the

patient had a second grand mal seizure and a third EEG taken within 24 hours after the second seizure again showed no abnormalities.

After the second seizure, the promazine was discontinued and the patient showed a recurrence of restlessness and anxiety, and was given 13 electroshock treatments in a 6-week period, resulting in a temporary remission of symptoms.

One month after the last EST treatment, the patient was taken to the EEG laboratory and intravenous promazine was administered while continuously recording the EEG. Three hundred mgm. of promazine was given in an 8-minute period and after a 15-minute interval an additional 150 mgm. of promazine was given; the tracing was continued 25 minutes after the termination of the injection. There was a generalized slowing of the EEG during the injection which was associated with the quieting of the patient's restless behavior. These slow waves were identified as "drowsy phenomena." The impression was that this was a "normal tracing with no evidence of paroxysmal features" either during or after the intravenous administration of a large dose of promazine.

During a double-blind evaluation of 75 patients in a comparison of promazine and chlorpromazine, 10 were observed to have seizures.

At the end of the study when the data was examined, it was found that of the 10 patients who had seizures, one patient had a prior history of seizures. This patient had repeated seizures on promazine, chlorpro-

¹ Resident in Psychiatry, Nebraska Psychiatric Institute, Omaha, Nebr.

² Assistant Professor of Neurology and Psychiatry, University of Nebraska College of Medicine.

³ Associate Professor of Medical Psychology, University of Nebraska College of Medicine.

⁴ Professor of Neurology and Psychiatry, University of Nebraska College of Medicine.

⁵ This study was supported by the Nebraska Board of Control Fund for Psychiatric Research.

and the placebo, but did not have seizures on metaphenylbarbituric acid. Another patient had seizures while on promazine and chlorpromazine, and the remaining patients had seizures only while on promazine at a dosage of 800 mgm. daily.

At a second state hospital, a group of 24 severely ill male mental patients, varying in age from 27 to 71 and having no prior history of epilepsy or organic disorders, was selected. Control EEGs were recorded before medication and following one month's promazine treatment. The dosage was started at 150 mgm. daily and gradually increased to a maximum dose of 900 mgm. daily which was continued for the last two weeks of the period. EEGs were taken following this one-month period of promazine medication and compared with those taken prior to the institution of drug therapy.

Six subjects of the 23 who completed the one-month period of drug administration showed higher voltage rhythmic activity in one of the records than the other, the promazine records showed the highest voltage in

5, the non-promazine in one. No spike activity or activity suggestive of seizure phenomena was seen in any of the tracings, and all changes could be explained on the basis of diurnal variations.

The conclusions drawn from the above data suggest that some of the phenothiazine derivatives produce *grand mal* seizures when given in high dosages to certain patients. Although promazine would appear to be one of the most frequent offenders, it was not found to produce seizure discharges or other changes in the EEG in intervals between seizures in this study. The patient known to respond to promazine with seizures was given 450 mgm. of promazine intravenously during the recording of an EEG without producing seizure discharges. Although promazine, and to some degree other phenothiazine derivatives, apparently either lower the seizure threshold or produce foci of hyperirritability, there is no evidence, clinically or from the EEG, that this effect persists beyond the period of drug administration.

THE EFFECT OF CETADIAL ON DELIRIUM TREMENS, ALCOHOLIC HALLUCINOSIS, AND ALCOHOL WITHDRAWAL¹

D. WEXLER, M.D., P. H. LEIDERMAN, M.D., J. MENDELSON, M.D.,
P. KUBZANSKY, PH.D., AND P. SOLOMON, M.D.²

INTRODUCTION

Steroids, particularly adrenal cortical extracts, have been used in the treatment of alcoholism since 1949(1). Reports by Campbell and Sleeper(2) and Lemere(3) have indicated that Cetadial (5-androsterone-3, 16-diol) is of value in relieving the symptoms of alcohol withdrawal. Unfortunately, these reports offered no data that could be evaluated from the point of view of the

severity or nature of the alcoholic withdrawal states and no control studies were made. Victor and Adams(4) have stressed the difficulty of assessing the effect of a medication on the course of alcohol withdrawal because spontaneous remission is so frequent.

METHOD

Cetadial and placebo were given to 82 patients suffering from various degrees of alcohol withdrawal. The following criteria were used to categorize the patients:

1. Alcoholic withdrawal—tremulousness, perspiration, with or without confusion.
2. Alcoholic hallucinosis—tremulousness, perspiration, confusion, visual or auditory hallucinations, but normal orientation for time, place, and person.

¹ From the Psychiatry Service, Boston City Hosp., and the Department of Psychiatry, Harvard Med. School. This study was aided in part by a grant from the Nepera Chemical Co., to whom we are also indebted for the supply of Cetadial used.

² Respectively: Assistant in psychiatry, Teaching Fellow in psychiatry, Teaching Fellow in psychiatry, Research Assoc. in psychology, and Assistant Clinical Professor of psychiatry, Harvard Medical School.

3. Delirium tremens—tremulousness, perspiration, confusion, visual or auditory hallucinations, disorientation for time and place.

THERAPEUTIC REGIME

Cetadiol in a concentration of 5 mg. per cc of propylene glycol was given orally as follows: 80 mg. on admission or at the onset of symptoms, 40 mg. in 8 hours, and then 20 mg. every 4 hours. The patient received 200 mg. in the first 28 hours and 120 mg. on each succeeding day until he was asymptomatic or until the treatment was abandoned because symptoms of alcohol withdrawal persisted or increased to such an extent that the patient's welfare appeared to be in jeopardy. The patient also received vitamins, house diet as tolerated, intravenous fluids as needed, and any other treatment necessitated by his medical condition.

The average length of time Cetadiol was given in each diagnostic category was as follows: delirium tremens—40 hrs., alcoholic hallucinosis—42 hrs., alcoholic withdrawal—60 hrs. In patients with alcoholic hallucinosis and delirium tremens it was often necessary to discontinue Cetadiol because the patients became increasingly violent or had no symptomatic improvement.

RESULTS

Five patients were eliminated from consideration because of their inability to retain Cetadiol and 4 because of the diagnosis of Korsakoff's psychosis. Thus 73 remained. Cetadiol was given to 56, 11 of whom received the drug in a double blind study. Placebo consisting of a mixture of cholesterol and propylene glycol was given to 17, 10 of whom received it in the double blind study. The results may be seen in the accompanying table.

There appears to be no significant difference between the effect of Cetadiol and the placebo. Since these medications were studied only with respect to their immediate effect on the conditions involved, the subsequent course and final outcome in these cases is not included here.

CONCLUSIONS

Cetadiol does not have a tranquilizing or sedating effect on patients suffering from delirium tremens or alcoholic hallucinosis. It does not shorten the course of delirium tremens. The placebo used in this study is as effective as Cetadiol in relieving symptoms of alcohol withdrawal.

TABLE 1

THE RESULTS OF ADMINISTERING CETADIOL AND PLACEBO TO PATIENTS IN VARIOUS FORMS OF ALCOHOLIC WITHDRAWAL STATES

	Cetadiol administration			Placebo administration		
	No. of patients	Complete remission	% remission	No. of patients	Complete remission	% remission
Alcoholic withdrawal ...	21	17	81	4	3	75
Alcoholic hallucinosis ...	19	9	47	5	2	40
Delirium tremens	16	4	25	8	2	25
Total	56	30	54	17	7	41

BIBLIOGRAPHY

1. Smith, J.: *Quart. J. on Study of Alcoholism*, 10: 251, 1949.
2. Campbell, C. H., and Sleeper, H.: *Am. J. Psychiat.*, 112: 845, 1956.
3. Lemere, F.: *Am. J. Psychiat.*, 113: 930, 1957.
4. Victor, M., and Adams, R. D.: *Proc. Assoc. Res. Nerv. Ment. Dis.*, 32: 526, 1953.

MARSILID IN DEPRESSION

T. R. ROBIE, M.D.¹

It appears that the best news for psychiatry in 1957 was the discovery that Iproniazid (Marsilid-Roche) protects serotonin

from monoamine oxidase. Serotonin, allowed free activity in the brain, is perhaps the most energetic releaser of reserve power in the human machine, and this effect will

¹ 676 Park Ave., East Orange, N. J.

come melancholia in a majority of cases within 2 to 4 weeks.

Over a period of 8 months, 65 patients treated on Marsilid showed 46 good results, and these data could have been even better if the 10 patients who discontinued the first week, had continued 4 weeks, the period necessary for a fair appraisal of the chemical's effectiveness. Some of the 46 "improved" cases showed remarkable metamorphoses. It was not unusual for some to declare "I feel better now than I ever felt before in my life." The psychiatrist derives much satisfaction in observing the return of optimism, gay manner, joviality, and normally spontaneous speech, in a recently retarded, hopelessly disconsolate person who might have resorted to self destruction,—knowing this was accomplished by a pill.

This chemotherapeutic method possesses major advantage for the person who must remain on the job, who dares not take a leave of absence for 6 weeks to undergo electrocoma therapy. The psychiatrist must not forget however that the return of optimism occurs sooner when electrotherapy is administered.

Certain side effects sometimes occur when Marsilid is taken in full dosage. Too rapid weight gain can be interrupted by reducing dosage. Jaundice, reported in rare instances, has not occurred in any of these cases. Perhaps conservative dosage prevented this. Edema of ankles or eyelids sometimes with allergic generalized body rash has occurred in 3% or 4%. This can be obviated by stopping the drug and administering Diuril (Merck) with resumption of Marsilid in lower dosage when edema is gone. Reduction of libido or impotence occurs rarely—usually obviated by reducing Marsilid dosage and

administering androgens or panthenol, or both. (Increase in libido also occurs in rare instances.) *Overdosage* may produce the major complication of a manic type psychosis.

These side effects must be weighed against the occasional fracture complications when ECT is administered to melancholy patients without the protection of a muscle relaxing drug (fractures are avoided today by those who use anectine routinely). Certainly to the aggressively suicidal patient, electrocoma therapy with succinyl to prevent fractures, must be given immediately as a life saving emergency measure, because the 3 to 4 week latency period before Marsilid induces remission involves a too serious calculated risk. Once the extreme melancholia is obviated, many patients can convalesce on Marsilid, thus reducing the electric treatments and prophylactically preventing future recurrences.

Clinical evidence suggests that Iproniazid may induce a pyridoxine deficiency in some persons, but laboratory confirmation is not yet available. Therefore this B complex factor should be administered routinely with Marsilid. A tablet combining the two is now available for investigational purposes. As greater proficiency is acquired in the use of this new psychic energizer, complications may be reduced.

The individual case histories (impossible to describe in a short clinical note) make encouraging reading to psychiatrists who are constantly confronted with suicidal risks in their practice.

ADDENDA: Case histories and other details will be found in the 1957 Transactions of the Association for Research in Nervous and Mental Disease and in a forthcoming issue of the *Journal of Experimental and Clinical Psychopathology*.

THE EFFECT OF CHLORPROMAZINE ON THE BEHAVIOR OF DISTURBED CHILDREN¹

GORHAM G. LANE,² WILLIAM G. HUBER,³ AND F. LOREN SMITH²

Although chlorpromazine (10 (3-diethylaminopropyl)-2 chlorphenothiazine) is often

¹ This study was made possible through the cooperation of the clinical staff, Governor Bacon Health Center, Delaware City, Del.

² University of Delaware, Newark, Del.

³ Governor Bacon Health Center, Del.

used as a therapeutic adjunct in treating mental illness, its effects on behavior have not been clearly identified. Flaherty and Gatski (1), and Freed and Peifer (2) noted that it had a calming effect on the behavior of disturbed children. Gibbs *et al.* (3) found no

evidence of its therapeutic effectiveness. One difficulty in evaluating its effectiveness is that of specifying precisely the forms of behavior affected. The present study attempted to overcome this difficulty.

In a preliminary investigation behavioral responses of disturbed, institutionalized children were recorded over a three day period in a classroom situation. Responses were defined in terms of actual behavior, such as: "poking," "slapping," or "hitting." The items were subsumed under 7 categories such as: "physical violence," "nervousness," "swearing," "irrelevant noises." During this stage of the investigation, two experimenters observed 6 children over a period of 5 days and, using time sampling procedures, recorded the number of responses shown by each child in each of the 7 categories. Two categories were chosen as showing sufficient inter-rater agreement so that they might serve in the subsequent experiment. These were "physical violence" and "nervousness," with coefficients of correlation between raters of .83 and .74, respectively. For "physical violence" 9 separate behavior items were observed. For "nervousness," 8 items were observed.

Subjects in the subsequent experiment were 8 maladjusted, institutionalized males ranging in age from 10 through 12 years. Four were drawn from one classroom and 4 from another. Subjects were arranged into two groups by matching a child from each classroom with one from the other, on the basis of psychiatric diagnosis and age. Placebo or chlorpromazine (25 mg.) was administered 3 times daily by house parents in an order counterbalanced over groups. Neither house parents nor experimenter knew who was receiving the placebo or the drug. Behavior ratings were made twice daily while the children were attending regular classes.

Treatment of results used a derived score, $f - f_0/f_0$ with f the number of responses for

each day, and f_0 the average daily responses during an initial control week.

Analysis of variance showed no significant differences either for order or conditions; for physical violence $F = .68$, for nervousness $F = .84$. No cumulative effect of chlorpromazine was noted.

The data showed considerable variability both for a given subject from day to day and also from subject to subject. For example, the physical violence responses of one subject during one week under chlorpromazine ranged from .82 through -1.00, and under placebo from 1.40 through -.80. Other subjects' responses showed as much or more variation. The drug had a greater effect in suppressing physical violence than nervousness: 6 subjects showed a lesser number of physical violence responses for the drug period, while only two showed an increase. Four subjects showed an increase in the number of nervousness responses under the drug, and 4 showed a diminution. It is possible that the drug may be found to be most effective in suppressing gross responses such as those measured in the area of physical violence.

Failure of these data to show statistically significant effects is in contradiction to many studies, and may derive from the use here of objective response observation. The possibility that biochemical differences among children interact with the drug to produce intra- and inter-individual variability of behavioral effects should be further investigated.

BIBLIOGRAPHY

1. Flaherty, J. A., and Gatski, R. L.: Management and rehabilitation of emotionally maladjusted children—use of chlorpromazine. (Scientific Exhibit, 104th meeting of the A. M. A., Atlantic City, New Jersey, June, 1955.)
2. Freed, H., and Peifer, C. A.: *Am. J. Psychiat.*, **113**: 22, 1956.
3. Gibbs, J. J., Wilkens, M. C. B., and Lauterbach, C. G.: *Am. J. Psychiat.*, **113**: 254, 1956.

ADMINISTRATIVE NOTE

A METHOD FOR ACCELERATING DISCHARGE FROM STATE HOSPITALS

FREDERICK B. CHARATAN, M.D., HERMAN C. B. DENBER, M.D., AND
JOHN H. TRAVIS, M.D.¹

Despite the current emphasis on rehabilitation, there are many remitted psychotic patients who remain in the hospital for social as opposed to psychiatric reasons. 'Social supports' in the shape of spouses, interested relatives, friends, or employers are often lost, particularly when mental illness is lengthy or repeated. This renders the task of returning such patients to the community much harder. They may be compelled to live isolated lives in furnished rooms, without monetary reserves, or friends to turn to until they find their place in society again. They may very well feel anxious and insecure, receive little encouragement, and find the change from the shelter of the hospital to the stress of normal life too abrupt. Social isolation helps to contribute towards early relapse.

Since August 1957, we have been encouraging selected female patients from Manhattan State Hospital to work in the city while continuing to reside in the hospital. These patients have included schizophrenics, psychopaths and alcoholics, where social factors such as marital separation, rejection by their families, or breakup of the home would ordinarily have delayed or prevented their discharge. The patients have been selected because of ability and motivation to work, based on previous work record, nurses' reports, and psychiatric assessments. Unreliability, impaired superego control, inability to form a reasonable relationship with the psychiatrist, habit deterioration, and easily triggered aggressive or depressive reactions formed the main contraindications.

At the time of writing, of 10 patients, 3 have left the hospital and are still at work. Two patients have individual rooms in the research division and go daily to work. Two

patients lost their jobs, one through dishonesty, and one probably through poor initiative and performance. Two patients relapsed (return of auditory hallucinations; recommenced drinking), and one patient is still seeking work.

Patients are asked to bring a business card as evidence of employment. For those without funds, ten dollars are loaned for lunches, stationery, etc., to be repaid out of wages. Patients are also expected to contribute a reasonable sum for their room and meals. Explanations of the scheme have been given to all 3 shifts of nursing staff to avoid misunderstandings. Early breakfasts are arranged where needed, and evening interviews given to follow progress and discuss problems.

The advantages of this scheme are that patients can be observed while actually in the work situation, obtain the support and encouragement of the nursing staff, physicians, and other patients, thus having a large audience before whom they are motivated to succeed. Initiative and resourcefulness are stimulated. Working patients are encouraged to find their own accommodations where possible. They are able to accumulate a small sum of reserve money. It is believed that the time spent in the hospital is reduced in the long run. The patient does not have to wait for social service to find both job and living quarters. As a corollary, the nurses are able to give more time to the remaining patients.

We feel that this scheme offers some socially handicapped patients the chance to work and to discuss with the psychiatrist problems arising from their graduated return to daily life. We hope that the improved atmosphere in the ward due to the 'working patients' will assist us in starting a sheltered workshop, where less well patients may be trained in good work habits against the time of their eventual discharge.

¹ From the Research Division, Manhattan State Hospital, Ward's Island, New York 35, N. Y., and the College of Physicians and Surgeons, Columbia University, New York, N. Y.

CASE REPORTS

FATAL AGRANULOCYTOSIS DUE TO TRIFLUPROMAZINE HYDROCHLORIDE¹

FRANK J. AYD, JR., M.D.²

The list of pharmaceutical agents which produce agranulocytosis has expanded since the introduction of the phenothiazine derivatives as tranquilizers. To this list can be added triflupromazine hydrochloride, designated chemically 10-(3 dimethylaminopropyl)-2 trifluoromethyl phenothiazine hydrochloride, since a case of fatal agranulocytosis has resulted from its administration.

CASE REPORT

This patient, a 52-year-old white woman, had a chronic schizophrenic psychosis, paranoid type. In May 1956 she was started on perphenazine 20 mg. daily. This dosage was reduced gradually to 5 mg. a day. After 243 days of treatment perphenazine was discontinued because of an apparently satisfactory symptomatic remission. A total of 2,889 mg. of perphenazine had been taken by this patient. Prior to, during, and at the conclusion of perphenazine therapy the white blood cell count and differential were within the range of normal variation.

Sixty-one days later this patient relapsed. She was started on triflupromazine hydrochloride 100 mg. four times a day. After 7 weeks the dosage was lowered to 100 mg. twice daily. On the 80th treatment day, by which time the patient had taken 22,800 mg. triflupromazine hydrochloride, she complained of excessive fatigue, drowsiness, fever, and sore throat. On examination her temperature was 102 degrees and a peritonsillar abscess was discovered. An immediate white blood count disclosed 700 white cells, all lymphocytes. Antibiotic and steroid therapy was started immediately. The peritonsillar abscess gradually enlarged necessitating incision and drainage to relieve the resulting respiratory obstruction. In spite of intensive medical treatment, death occurred 5 days after the agranu-

locytosis was detected. Permission for post-mortem examination was refused.

Prior to the institution of triflupromazine hydrochloride therapy, this patient's routine blood picture was normal. After the onset of the agranulocytosis her daily white blood count varied from 700 to 1500 WMC's with 0 to 2 granular cells.

COMMENT

On the basis of its chemical structure, triflupromazine hydrochloride belongs to the "chlorpromazine model" group described by Freyhan(1). The phenothiazine derivatives that have caused agranulocytosis to date all belong to the "chlorpromazine model" group having in common 3 carbons in a straight chain. Mepazine, which does not have a side chain with 3 carbons, is the only exception. Phenothiazine derivatives which have Piperazine radicals at the end of the 3 carbon straight chain have not caused agranulocytosis. This patient took in 243 days 2,889 mg. of perphenazine which has a Piperazine radical at the end of the 3 carbon straight chain without any adverse effect on her hematopoietic system. However, when treated with triflupromazine hydrochloride which belongs to the "chlorpromazine model" group and does not have a Piperazine radical attached to the 3 carbon straight chain, she developed a fatal agranulocytosis. Time will tell if this is a significant clinical observation.

BIBLIOGRAPHY

¹ The triflupromazine hydrochloride received by this patient was furnished by The Upjohn Company, although it now is marketed by E. R. Squibb and Sons under the trade name, Vesprin.

² 6231 York Rd., Baltimore 12, Md.

1. Freyhan, Fritz A.: Therapeutic Implications Of Differential Effects Of New Phenothiazine Compounds. Read at New York Divisional Meeting of The American Psychiatric Association, November 16, 1957.

MARSILID IN CATATONIC SCHIZOPHRENIA

CARL BREITNER, M.D.¹

Since the introduction of tranquilizing medication in psychiatry, many problems concerning hyperactive mental patients have been reduced or solved. The use of tranquilizing drugs has not been recommended for the hypoactive or depressed patient.

Recently, Iproniazid² has been recommended for the purpose of stimulating such patients. Numerous reports on the effects and side effects of this drug are already available. They indicate that Iproniazid inhibits monoamine oxidase, thereby slowing down the inactivation of tissue formed serotonin. All reports are agreed that the drug produces eudamonia and increased appetite in proper dosages. A number of reports indicate that its psychiatric use has been successful in depressions (1, 2, 3, 4).

This preliminary report is designed to direct the attention toward an extended use of Marsilid, namely, for the treatment of schizophrenic patients of the stuporous catatonic type. In this study, Marsilid was first tried on some catatonic patients who previously had not or only temporarily responded to ECT. Some of these patients had been in the Arizona State Hospital for several years and had been continuous feeding problems. Most of them had responded temporarily to ECT but stopped eating and returned to muteness, usually within a week or so, when ECT was discontinued. Some of these catatonic patients responded to Marsilid alone and some to Marsilid in combination with ECT. Improvement was frequently noted within a period of days and maintained on gradually reduced doses of Marsilid. It is considered significant that since this drug has been in use at this institution, not a single patient has required tube feeding.

The preferred dosage has been 50 mg. t.i.d., accompanied by Pyridoxine 10 mg. daily. The dosage was reduced if the patient showed excessive hyperactivity or other side effects.

CASE HISTORIES

A 27-year-old Negro woman committed to the hospital on 12-28-56 diagnosed schizophrenic reaction, catatonic type. She was a deportee from the Metropolitan State Hospital in California where she had been admitted in October 1956 as withdrawn, hallucinating and not eating.

After admission here, she had several courses of ECT to which she responded with marked improvement, but on each occasion relapsed within a few days after ECT was discontinued. As usual the main difficulty was the feeding problem and complete muteness.

The patient was then started on Marsilid 50 mg. t.i.d., to which she responded quickly. She started eating, became a good worker, was cheerful and pleasant. Medication was reduced to 50 mg. of Marsilid daily. The patient was discharged on 10-19-57.

A 42-year-old single Negro female, admitted to this hospital on 9-12-57 diagnosed schizophrenic reaction, catatonic type.

On admission, she was brought in on a stretcher, mute and negativistic, stared at the ceiling and would not respond to questions. She improved after a course of ECT temporarily, but relapsed after one week and again became mute with occasional posturing. Tranquilizing medication did not change the picture. However, she continued to respond to ECT temporarily. She was then placed on Marsilid and is now showing marked improvement. She is friendly and co-operative, helpful on the ward, cheerful and responsive.

These and similar experiences seem to indicate that Marsilid is of value in the treatment of catatonic schizophrenia. At this time, no attempt is made to conclude from the limited material available in what percentage of cases favorable results may be expected.

BIBLIOGRAPHY

1. Loomer, H. P., and Kline, N. S.: Iproniazid, an amine oxidase inhibitor etc. Report read at Regional Research Conference of A.P.A., Syracuse, N. Y., Apr. 6, 1957.
2. Crane, George E.: *J. Nerv. & Ment. Dis.*, 124: 322, Sept. 1956.
3. Ayd, Frank J., Jr.: *Am. J. Psychiat.*, 114: 459, 1957.
4. Robie, Theodore, personal communication.

¹ Arizona State Hospital, Phoenix, Ariz.

² Marsilid, brand of Iproniazid Phosphate, Roche.

SEVERE ANGIONEUROTIC EDEMA DURING CHLORPROMAZINE THERAPY

FREDERICK R. HINE, M.D.¹

The edema occasionally reported as a side-effect of chlorpromazine therapy is of a mild or transient and non-specific type. However Cronqvist, *et al.* (1), have described two cases of acute angioneurotic edema in patients under treatment with chlorpromazine, one of whom experienced some respiratory distress. The present report describes a single case of severe angioneurotic edema occurring during chlorpromazine administration and responding to antihistamine and ACTH therapy.

The patient, a 34-year-old white female, had been psychotic for 9 years, with a diagnosis of schizophrenia. On July 22, 1957, chlorpromazine was prescribed for the first time at a dose of 50 mg. t.i.d., increased to 150 mg. t.i.d. on July 26 and continued at that level until the onset of toxic symptoms. During this treatment the patient became slightly more attentive and responsive to the ward personnel and was not assaultive. Routine blood counts were within normal limits throughout the period described by this report. She was not receiving medication other than chlorpromazine.

On August 13, a slight puffiness of the lips was noticed. By the following day moderate edema of lips, cheeks and eyelids was readily apparent. Chlorpromazine was discontinued and the patient was placed on Benadryl 50 mg. q 4 h by mouth. By the evening of that day, August 14, she was in considerable discomfort with edema involving the entire face. Epinephrine 1:1000 was administered in two one-half cc. doses at an interval of two hours without improvement. The patient was restless during the night but her

vital signs remained normal and no further emergency treatment was given.

On the morning of August 15, the patient was found to be in great distress. The severe facial edema had caused extrusion of the contents of the sebaceous glands. The patient's eyes were completely obscured and the tongue and mucous membranes of the mouth seemed distinctly swollen. She could swallow small amounts of liquids. The degree of "general toxicity" was shown by the fact that this patient, in contrast with her customary severe restlessness, now remained almost immobile in bed. Her temperature was slightly elevated to 100.0° (R); physical examination was otherwise normal. Benadryl was increased to 100 mg. q 4 h and 40 units HP ACTH jel was given intramuscularly in a single dose. The patient remained at bed rest and in considerable discomfort for the remainder of the day with a temperature up to 102.2° (R). During the afternoon she developed a generalized erythematous, maculopapular rash.

By the following day, August 16, the edema had subsided slightly. The patient's eyes were visible; she was able to swallow somewhat more freely and was afebrile. The rash persisted. She again received 40 units of HP ACTH jel intramuscularly and Benadryl 100 mg. by mouth q 4 h. This regime was continued over the next two weeks and during this time the patient's edema gradually subsided as did the rash. In about 10 days she had returned to her physically healthy, though psychotic, state.

BIBLIOGRAPHY

¹ Director of Research and Training, Southeast Louisiana Hospital, Maudeville, La.

1. Cronqvist, S., Rayner, S., and Wretmark, G.: *Nordisk Medicin* 53:720, May 5, 1955.

PRELIMINARY REPORTS

THE USE OF NUCLEIC ACID IN AGED PATIENTS WITH MEMORY IMPAIRMENT

D. EWEN CAMERON, M.D.¹

During the past two years studies on the effects of the nucleic acids (deoxyribonucleic and ribonucleic acids) have been carried out on 23 aged patients suffering from impairment of the retention phase of memory. These investigations are part of a long-continued search for agents capable of modifying this memory impairment.

Weiss (1955), in summarizing his work upon the neuron, pointed out that this structure is constantly renewing itself. The material essential for its continued activity is produced at its nucleated end and is passed up towards its end plates. He refers to the reports of Hyden *et al* (1950) who deduced a high rate of protein synthesis in the cell from the elevated nucleic acid concentration in and around the nucleus, and to the findings of Samuels (1951) and others that labelled phosphoprotein seems to shift peripherally in nerves.

Numerous studies have shown that nucleic acid and protein metabolism are intimately related and, in particular, that the synthesis of ribonucleic acid is closely linked to protein synthesis. It has also been shown that an increase in the ribonucleic acid in the cell leads to an increase in protein, and that the ribonucleic acid increase relative to protein precedes protein synthesis.

We therefore started to explore the use of nucleic acids in aged patients in whom there was an impairment in the retention phase of memory.

Procedure: In January 1956 we commenced the use of deoxyribonucleic acid (DNA) given intravenously in association with intrathecal hyaluronidase. We combined these substances in an attempt to get DNA into intimate contact with the brain. DNA was selected since it is found almost exclusively in the nucleus. With encouraging preliminary results we later began the

use of ribonucleic acid (RNA) because of its apparent closer relationship to protein synthesis.

Both DNA and RNA were put up in a 10% solution;² saline was added to bring the injection up to 10%; the intravenous injection was done slowly. The initial dose varied from 100 to 500 mgms, depending upon the patient's condition. Up to 4 gms of DNA, and up to 2 gms of RNA, were given daily intravenously.

In the last year we have been exploring the use of RNA, orally in capsules, the maximum amount being 75 gms daily. The average amount is considerably lower, ranging from 10 to 20 gms.

The results were assessed on the basis of: a counting test; clinical assessment; assessment by relatives; assessment by the social service department. The patients are kept on prolonged follow-up for continued study.

Results: In all 23 patients favorable results were noted. In 50% the results were good. The best results were obtained in patients having severe memory deficits and marked confusion. In most of these the confusion cleared up, orientation returned and there was considerable or complete restoration of retention. Results were usually noted after 4 or 5 daily injections. Continued injections after 2 weeks usually were not necessary. Where improvement of the memory deficit was partial, further administration of the nucleic acids, no matter how long continued, did not bring about full restoration. Intravenous injection was the preferred route; oral administration gave limited results.

Side Effects: Side effects such as temperature rise and occasional pain at the site of injection were noted following intravenous injection, and gastrointestinal disturbances after oral doses in a few cases.

(Bibliography on request)

¹ From the Allan Memorial Institute of Psychiatry, 1025 Pine Ave. W., Montreal, Que.

² Prepared by the J. F. Hartz Co., Ltd., Toronto, Ont.

THE USE OF RITALIN¹ INTRAVENOUSLY AS A DIAGNOSTIC ADJUVANT IN PSYCHIATRY

HERBERT FREED, M.D.²

Following the observation that some patients who received Ritalin¹ orally seemed to verbalize more freely and even show some push of speech, a pilot study was made to note if such an effect was elicited with the intravenous administration of Ritalin.

A preparation of lyophilized Ritalin (Methyl-phenidylacetate hydrochloride) in a concentration of 10 mgm. of Ritalin per cubic centimeter was administered to a series of more than 20 patients in both private office practice and in a private sanatorium, Rose-neath Farms. The response to doses of 10 to 15 mgm. in 14 of 20 cases was significant in that there was increased verbalization. In 5 of these cases, this could be classified as a "push of speech." One patient, G.L., a 54-year-old female revealed hitherto repressed material, not obtained before when the combination of sodium amytal and methamphetamine was administered. The patient could not explain why she had not revealed this censored material before except that her affective state seemed different on this last occasion. It has been our custom to use the combination of sodium amytal 0.25 grams and 20 mgm. of methamphetamine well diluted and administered intravenously to elicit repressed psychic content and to further ab-reactive responses in selected cases (1, 2). In this clinical note on the use of Ritalin intravenously, the opportunity is taken to contrast the responses of these two agents. The simultaneous use of sodium amytal with the Ritalin was not feasible because of chemical incompatibility. When sodium amytal was

administered intravenously immediately after the Ritalin injection the Ritalin effect was tempered.

These are the tentative observations: 1. The Ritalin preparation elicits a response which is usually less laden with affect, *i.e.*, the abreaction is less intense. The affective coloring is not as likely to be leuphoric and is often tinged with more hostility. This may be manifested wholly by crying with little verbalization. In 2 cases the hostility was evidenced by a complete withdrawal, characterized as passive aggression, which was transient. 2. Because the abreactive response was not as "depleting of affect" or as sustained with the Ritalin, the patient was easier to manage in the office interview. 3. The Ritalin preparation also does not produce insomnia in the post-treatment period as frequently as the methamphetamine-sodium amytal mixture does. 4. Side effects observed after Ritalin in 3 patients were post-injection headache and a feeling of chest constriction with palpitation in 2 cases, both transitory.

Inasmuch as the alteration of mood states and the manipulation of affects is increasingly important in all forms of psychotherapy, we are continuing this study in the use of Ritalin intravenously as a mood alterative and a diagnostic adjunct in psychiatry. Insight into the differences in responses with similar agents can further our knowledge of psychodynamics as well as psychopharmacology.

BIBLIOGRAPHY

1. Freed, H.: Danville State Hosp. Ment. Health Bulletin, 34: 1, 1956.
2. Freed, H.: Am. Practitioner and Digest of Treatment, 6: 706, 1955.

¹ The Ritalin used in this investigation was kindly supplied by James G. Smith of the Ciba Pharmaceutical Products, Inc., Summit, N. J.

² From the Department of Psychiatry, Temple University Medical School, Philadelphia, Pa.

ELECTROENCEPHALOGRAPHIC CHANGES IN CHRONIC SCHIZOPHRENICS UNDER CHEMOTHERAPY

MAX A. BRUCK, M. D., PH. D.¹

The Veterans Administration Chemotherapy Project (908 schizophrenics) made a separate EEG study on the 16 participating patients of the VA Hospital, Canandaigua, N. Y., possible. The patients received daily doses of either Thorazine 400 mg., phenobarbital 200 mg., promazine 400 mg. or placebo, each drug incorporated in the same type of tablet. The study was undertaken as a double blind test by a psychiatric team. The investigator added EEG tests for the 16 participating patients.

The effects of Thorazine on the EEG were studied before by several investigators (2, 3, 6, 8). Some of them noted changes, others did not. The contradictory results were probably due to the different methods of investigation. We concentrated on the alpha rhythm, a component of the normal EEG.

According to the experience that the alpha rhythm (frequencies from 8 to 12 cps. in our study) is best delineated in the occipital leads (1), we studied the tracings from the left occipital lead, connected with combined electrodes from both ear leads. As described before (7), the relative amount of alpha was determined by passing a map measure along the base line of all the alpha waves during 30 seconds. A ratio was calculated by dividing the absolute time of alpha by the total time, (artefactual parts in the record excluded). Blood glucose levels were not determined because of normal eating habits of the patients, no clinical signs of hypoglycemia and early recording after eating. The alpha ratios immediately before starting chemotherapy and 6 weeks later were measured.

The average alpha ratios (in thousands) of the patients on Phenobarbital increased 122.25, on promazine 34.25, on placebo 8.75.

on Thorazine 160.75. Although the increase in the Thorazine group appears to be significant at the 1% point, a variance analysis (5) shows that the difference between the drug groups is not significant: the variation between and within subjects is so high that the increase of the alpha rhythm in the Thorazine group could be due to chance. Our value for F is 1.77. But this would have to be at least 3.49 to denote significance at the 5% point.

The result does not mean that the increase of the alpha ratio in our Thorazine group is definitely due to chance. It is also possible that the increase is real, but our series too small to give a statistically completely significant information. This study, therefore, despite the striking increase of the alpha ratio in the Thorazine group is only preliminary and calls for an investigation on a larger series. An electronic analyzer would be helpful in such a research.

We are indebted to Dr. Fred Heilizer for his helpful advice in selecting the proper method of variance analysis.

BIBLIOGRAPHY

1. Adrian, E. D., and Yamagiva, K.: *Brain*, 58: 323, 1935.
2. Galenko, V. E., *et al.*: *Neuropath. Psych., U.R.S.S.* 302, 1956.
3. Lehmann, H. E., and Hanrahan, G. E.: *Arch. Neurol. Psych.*, 71: 227, 1954.
4. Liberson, W. T.: *Am. J. Psych.*, 113: 601, 1957.
5. Lindquist, E. F.: *Design and Analysis of Experiments in Psychology and Education*. Boston & New York: Houghton Mifflin Co., 1953, p. 267.
6. Shagass, Ch.: *EEG Clin. Neuro-phys.*, 7: 306, 1955.
7. Strauss, H., Ostow, M., and Greenstein, L.: *Diagnostic Electroencephalography*. New York: Grune & Stratton, 1952, p. 28.
8. Turner, M., et Berard, E.: *EEG Clin. Neurophysiol.*, 6: 538, 1954.

¹ VA Hospital, Canandaigua, N. Y.

CORRESPONDENCE

FREUD AND LAY PSYCHOANALYSIS

Editor, THE AMERICAN JOURNAL OF PSYCHIATRY:

SIR: May I make reference to Dr. Eliasberg's letter on "Freud and Lay Psychoanalysis," published in the December 1957, issue of The American Journal of Psychiatry. One does not have to wait for Ernest Jones' third volume of Freud's biography in order to quote Freud on the problem of lay analysis, Freud's references to this question are numerous; just to cite one example—in Freud's *Collected Works*, Vol. XIV, pp. 289, 293, and 295 (German Edition) where Freud said in his epilogue to his monograph, *Lay Analysis*, "I have, of course, assumed that psychoanalysis is no specialty of medicine. I can't see how anyone can refuse to recognize this fact. Psychoanalysis is part of psychology, and not of medicine . . ." (1927).

That's why Freud did not wish to have psychoanalysis become the "handmaiden" of psychiatry. I can well understand that Dr. Eliasberg does not wish to adopt everything that Freud has taught. But to submit, as Dr. Eliasberg intends to, that Freud did not know what he was talking about and, above all, to say that Kant (who lived a century before Freud) had "answered" Freud, is another matter with which few analytically oriented psychiatrists may agree. Incidentally, Dr. Eliasberg's quotation of the Latin phrase, *quod licet Iovi non licet bovi*, does not seem to me applicable here, as "Jupiter" Freud, indeed, did "license" the "oxens" to practice analysis, as Dr. Eliasberg himself complained!

Last, but not least, the question arises, why Freud took the stand on lay analysis, which Dr. Eliasberg, *et al.*, criticize repeatedly. The answer can, in my opinion, be found in the origin of psychoanalysis: the social sciences. Ernest Jones' chapter on "Sociology" in his third volume seems to me an

excellent summary in this respect, although Jones, too, seems to be loath to give full credit to the ancestors of Freudian psychology: the German sociologists Georg Simmel and Leopold von Wiese (the latter in his famous *Beziehungslehre*), the French Le Bon, and the English MacDougall, to name but a few. Freud was aware of his godfathers, and stated so repeatedly. It is, perhaps, one of the unfortunate mishaps in medical history that the discoverer of psychoanalysis was a physician and, therefore, his students' claim of Freud's *Lehre* as a medical science: psychoanalysis is not a "science" and it is not a branch of medicine.

But because psychoanalysis is not a "science," Freud never entertained the idea that his *Lehre* was "complete" or "immutable," as Dr. Eliasberg interprets him; on the contrary! A *finished* product would run counter to the dynamic content of human beings, psyche and soma, which we call Life, and Freud was the first one to realize the ongoing and perpetual development of his thoughts and ideas, even after his death. . . . Therefore, it seems to me that Freud was, contrary to Dr. Eliasberg's opinion, "aware for what lay analysis was heading."

In summing up, it seems to me that we should approach the controversy of lay analysis on a more positive, *i.e.*, factual and scientific, level, perhaps more toward the point of view which Ernest Jones has taken, although the latter does not appear to be entirely free from ambivalent feelings towards lay analysis himself. Above all, I feel that one who considers himself a psychoanalyst or a student of Freud ought to embrace the master's *Lehre*, *as is*. Should any differences arise, they ought to be examined in the light of objective research and with the earnest attempt to search for the truth.

HANS A. ILLING, PH. D.,
Los Angeles, Calif.

REPLY TO THE FOREGOING

Editor, THE AMERICAN JOURNAL OF PSYCHIATRY:

SIR: I agree with Hans Illing's last words about the earnest attempt to search for truth.

I do not see how this tallies with what he says a few lines above about embracing the master's *Lehre, as is*. Illing seems to cling

to the *verba magistri* and the *verba magistorum magistri*. I can only hope that Dr. Illing will not dispute the right of anyone trained in psychoanalysis to say: *Hier irrte Freud*.

N. G. ELIASBERG, M. D., PH. D.,
New York, N. Y.

THE NATURE OF MAN

A man's nature is best perceived in privateness, for there is no affectation; in passion, for that putteth a man out of his precepts; and in a new case or experiment, for there custom leaveth him. . . . A man's nature runs either to herbs or weeds; therefore let him seasonably water the one, and destroy the other.

—FRANCIS BACON

A man resorts to dialectics only when he has no other means to hand. People know that they excite suspicion with it and that it is not very convincing. . . . It can be only the last defence of those who have no other weapon. . . . Reynard the Fox was a dialectician: what?—and was Socrates one also?

—NIETSCHE

SELF DISCIPLINE

Mistakes, misunderstandings, obstructions, which come in vexatious opposition to one's views, are always to be taken for just what they are—namely, natural phenomena of life, which represent one of its sides, and that the shady one. In overcoming them with dignity, your mind has to exercise, to train, to enlighten itself; and your character to gain force, endurance, and the necessary hardness. . . . Never to relax in putting your magnanimity to the proof; never to relax in logical separation of what is great and essential from what is trivial and of no moment; never to relax in keeping yourself up to a high standard—in the determination, daily renewed, to be consistent, patient, courageous.

—BARON STOCKMAR TO PRINCE ALBERT
(in Lytton Strachey: Queen Victoria)

COMMENT

THE CART BEFORE THE HORSE

It would be difficult, if at all possible, to dissociate one's assessment of current developments and trends from the orientation, hopes, and apprehensions of him who does the assessing. Even professional historians, having the same neatly packaged sets of data at their disposal, have been known to differ, sometimes quite substantially, in their appraisal of causes, meanings, and effects of epoch-making events. It will hardly be gained that the personal slant of the commentator is a major factor in his evaluations.

With the premise, therefore, that this, as any other, comment derives from a subjective attitude which has undoubtedly colored the writer's perspective, let it be said that American psychiatry today is going through a period of wholesome restiveness. Sincere self-searching within the ranks has become a refreshing—and refreshingly widespread—phenomenon. This applies to fundamental formulations and to their bearing on everyday practice. The trend has been evident in a number of statements made recently by some of the foremost thinkers among our colleagues and has found eloquent expression in two conferences held under the auspices of the Committee on Public Health of the New York Academy of Medicine, the transactions of which have been edited ably last year by H. D. Kruse (Hoeber-Harper).

Among the various areas which have come in for an overhauling, the concept and application of psychotherapy have been subjected to a constructively critical review.

Around the turn of the century, a wholesome departure from the preoccupation with symptom combinations and disease entities had introduced an emphasis on sick individuals rather than on their sickness. Paradoxically, this led in many quarters immediately away from the individual patients' specific peculiarities to a search for a cause responsible for all mental illness. The hope was that, once you had discovered a common etiologic denominator, you could work out a common therapeutic procedure held in readi-

ness for all comers. Sanguine scampering for "the" cause resulted in a number of shouts of Eureka. Focal infection, so some proclaimed, was at the bottom of all psychopathology; you treated the patient by pulling teeth, removing tonsils, appendices, and gall-bladders, and resecting parts of the large intestines. Others announced that the "glands of destiny, regulating personality" were the source of all deviant behavior; your job was to administer the right kind of hormone. There were other such claims, put forth with less fanfare perhaps, but with a great deal of conviction. The patient himself was bypassed on the route to surgery, endocrinology, "neurologizing tautology" (as Adolf Meyer called it), etc.

A much broader view gave rise to ingenious theories about factors influencing the development of personality and modes of treatment intended to do something about those factors. Psychotherapy came into its own. The patient became a participating, experiencing, communicating person given an opportunity to lay bare his conflicts and to modify his behavior. It would seem that the stage was thus set for a truly individualized adaptation of therapy to the unique, unduplicated needs of each patient. But somehow this desire was sidetracked by many in favor of an effort to work out a uniform method, a rule of conduct for the therapist who then should proceed according to precisely prescribed specifications. The training of young psychiatrists assumed, under the circumstances, the character of an exercise in imparting the niceties of an "approach." There is in psychiatry, burdened as it is with a huge and ever increasing vocabulary, hardly a worse misnomer than the term "approach." We do not approach a patient one way or another; it is he who approaches us with a quest for help.

This preoccupation with rigidly established procedure has tended to shove aside an important consideration which, as elsewhere in medicine, is a prerequisite for effective treat-

ment. Detailed knowledge of the method has much too often taken precedence over diagnosis, that is, detailed knowledge of the patient subjected to the method. The therapeutic cart is put before the diagnostic horse, with complacent reliance on the method decided on *a priori*.

It is this complacency which has recently received a major jolt. More and more voices are speaking out against the smugness which derives from a curiosity-stifling belief in what Adolf Meyer referred to as "exclusive salvationism" via an obsessively preordained mode of procedure. There is a growing demand for an integration of the existing "approaches." There is a cry for a flexible adaptation of the therapeutic goal to the specific physical, situational, and emotional needs of each patient on the basis of a thorough diagnostic study. There is, as a result, more elbow room for therapeutic experimentation

and an honest willingness to submit the results to unbiased evaluation. Adolf Meyer's advocacy of "pluralism" and "relativism," lost for a time in the shuffle of doctrinaire decks, is being revived. The diagnostic horse is being put back in its legitimate place before the therapeutic cart.

The restiveness in present-day American psychiatry is a healthy phenomenon and holds great promise for its immediate future. It augurs well for the practice and teaching of a kind of psychotherapy which, based on proper concern for diagnostic issues, will subordinate procedure to patient, set realistic goals, and in each instance reflect not only on what is to be done in terms of a fixed method but also on such important questions as for whom and for what the treatment is intended.

L. K.

THE "READER OF A PAPER" AND THE "LISTENER": SOME HERETIC THOUGHTS

"Listening to papers" is one of the many trials and tribulations of a psychiatrist—by far not the least; and the pages of professional magazines are customarily reserved for the very same people who "read papers." Psychiatric papers are probably not too different from those read at meetings of other branches of medicine—"only more so." Time and again I have sworn to myself never to attend another meeting or convention and never to listen to another paper—ever! But I end up like the man who stated: "To stop smoking is the easiest thing in the world—I have done it hundreds of times." And so, sooner or later, I find myself at the receiving end of a "paper" which is being read.

I always enjoy listening to a man who has something to say. But if a speaker has something to say—why does he not just go ahead and say it—why has he "to read a paper"? Psychiatrists who habitually inquire into the "why?" of human behavior seem to shun inquiries into the motivation of "paper-reading"—a rather amazing fact if one considers the usual intensity of their professional curiosity.

"Speaking" is one thing, "reading a paper" is something else. The former has its place as a valuable experience in interpersonal relationship; the latter is a rather irrational act, considering that the listeners are most likely all able to read themselves quite well, illiteracy being rare among psychiatrists. If the "reader of a paper" had the voice and the skill of a Charles Laughton, listening might be pleasurable. More likely, however, the reading is a stammering, fumbling or monotonous production of complicated sentences, constructed for careful reading in one's own studio, but not intelligible at the high speed at which they are thrown at us at the meetings. There is no regard for the fact that there exists a considerable difference between the spoken language, adapted to oral communication, and the written language, fit only for slow and careful reading. It is odd that this difference should be neglected by the very profession which has made interpersonal communication one of its main subjects of study.

A few papers are rich in value—most of them are not. I have listened to many

papers of considerable length, the pertinent content of which could have been summarized in a few sentences.

Other papers are constructed according to the time honored principle: "If you want to tell them something, first tell them what you are going to tell them—then tell them; then tell them what you have told them!" Still others leave us with the strong impression that the speaker had "to give a paper" for some reason or other, so that the reading of the paper is an end in itself and no longer serving any other purpose.

How then, may we ask, are papers selected for presentation? Most of us come to conventions trusting that the program committee has carefully considered the submitted papers and selected the cream of the crop. Have they really? Is it possible that the name and reputation of the author or of the institution from which the paper originates may sometimes be the decisive factor?

What does the listener get out of his attendance? A short while ago I attended a lecture given for explicitly stated didactic purposes, to teach techniques in group therapy. After the lecture one of my co-listeners, duly impressed by the famous name of the speaker, felt moved to give vent to his admiration of the performance. Since I myself felt disappointed I raised the question "what, if anything, did we learn from this didactic lecture?" Only then did several others of our group dare to show their own disappointment, similar to my own. Only then did one after the other object, that we had heard nothing but well known generalisations. The eulogist withdrew behind the statement, that he had enjoyed the strong feeling: "Here is a man who is a master of a difficult technique!" I felt like the Shah of Persia when he refused the Kaiser's invitation to a horse race: "I am

fully aware" he said, "that some horses run faster than others; and which one runs fastest does not interest me." I felt I did not have to come from far away to convince myself that some men master a technique well—I was aware of that fact. I came to learn.

Rarely do we meet a speaker who "speaks." If that happens it is an enjoyable experience—provided he has something to say. Even if he occasionally should get mixed up in his syntactical constructions, if he has occasionally to stop and think for a moment, or to check his short notes before going on, even if he has sometimes difficulty to find the right word, I still prefer him a thousand times to the reader of a smooth paper; and so I think would most of us. For spoken language is the natural mean of oral communication, as written language is designed to be read. Thoughts that a man can express in free speech can usually be understood by attentive listening; papers sometimes remain obscure even when one reads them slowly.

Why then are such "speakers" so rare? It seems that few men can handle their anxiety in facing an audience and that a rigidly fixed and prepared manuscript is their only defense, inefficient as it may be. If the speaker is a capable man and has something to say (and only such men should occupy the platform), then such behavior is certainly neurotic. One might then recommend that the speaker take his own medicine.

There is no doubt a corner in Heaven reserved for us, the listeners, a corner where no papers are allowed to be read. For the good Lord must love us—(to paraphrase Abraham Lincoln's famous *bon mot*)—as he has created so many of us.

HANS S. UNGER, M. D.,
Buffalo 10, N. Y.

NEWS AND NOTES

BOARD OF SCIENTIFIC COUNSELLORS FOR N.I.M.H.—A 6-member panel of non-government experts will provide consultation to the National Institute of Mental Health on the mental health research program conducted in laboratories and other facilities at the National Institutes of Health, Bethesda, Md., and at field stations.

Membership of the new panel, known as the Board of Scientific Counsellors of the National Institute of Mental Health, is apportioned selectively between clinical and fundamental science categories to maintain balanced perspective.

It is expected that in addition to their review of the Institute's scientific activities, the new counselling body will provide the Director of the Institute with objective viewpoints and guidelines on the long-range perspective of intramural research.

Membership on the Board is for a term of 4 years. However, for the purpose of establishing a rotation of tenure, the terms of the initial appointees, which commenced July 1, 1957, will expire at staggered intervals. The names, professional affiliations, and terms of the Board members are as follows: Chairman, Dr. Horace W. Magoun, Professor of Anatomy, University of California Medical Center (June 30, 1960); Dr. John Benjamin, Child Research Council, University of Colorado (June 30, 1960); Dr. Stanley Cobb, Bullard Professor Emeritus of Neuropathology, School of Medicine, Harvard University (June 30, 1959); Dr. Jordi Folch-Pi, Director of Scientific Research, McLean Hospital, Waverley, Mass. (June 30, 1959); Dr. Robert F. Bales, Associate Professor of Social Relations, Harvard University (June 30, 1961); and Dr. Neal E. Miller, Angell Professor of Psychology, Yale Institute of Human Relations (June 30, 1961).

DR. RAGAN HEADS DEPT. OF PSYCHIATRY, UNIV. OF FLORIDA.—Dr. Peter F. Ragan, III, assistant professor of psychiatry at Cornell University Medical College and assistant attending psychiatrist at New York

Hospital, has been appointed chairman of the department of psychiatry in the University of Florida's J. Hillis Miller Health Center by the State Board of Control. The appointment became effective Feb. 1.

SCHOOL FOR MENTALLY RETARDED, WEST SENECA, N. Y.—The plan for a new school for the mentally retarded at West Seneca, N. Y., has been announced jointly by Commissioner Paul H. Hoch, and John W. Johnson, Superintendent of Public Works. A psychiatric hospital for mentally ill children will also be constructed on the site, which comprises approximately 500 acres. Cost of the project is estimated at 50 million dollars.

The new school will serve the counties of Erie, Niagara, Orleans, Genesee, Wyoming, Allegany, Cattaraugus, and Chautauqua. Patients from those counties are now being received at Newark State School, Newark, N. Y. Mentally retarded persons of all ages will be accepted for care, training, and treatment at the school.

Designed for 2,400 patients, the institution will be provided with service facilities for future expansion, if necessary, to accommodate 3,000. It will be constructed on a modified cottage plan and will be equipped with full hospital, treatment, training, and rehabilitation facilities.

DR. JOHN F. STOUFFER RETIRES.—Dr. John F. Stouffer, chief of the neuropsychiatric department at Philadelphia General Hospital for 34 years, retired on February 1, 1958. Public officials, prominent members of the medical profession and representatives of various civic organizations honored him at a banquet at the Penn Sherwood Hotel, January 30, where Dr. Robert Matthews, Pennsylvania Commissioner of Mental Health, acted as toastmaster, and Dr. Francis J. Brace land, past president of the A.P.A. and psychiatrist-in-chief at the Institute of Living in Hartford, Conn., was principal speaker.

Dr. Stouffer was named chief of the psychiatric department in 1925, when the staff

consisted of a part-time secretary and 8 part-time physicians. Today the 208 bed unit has a medical staff of 18 full-time and 43 part-time psychiatrists. During his years as chief, more than 60,000 patients have been admitted to the institution.

NATIONAL INSTITUTE ON CRIME AND DELINQUENCY.—The 1958 meetings of the National Institute will be held in the newly completed Deauville Hotel, Miami Beach, Fla., May 18-21, 1958.

Plans for the Institute include over 20 separate workshops for discussion of specific aspects related to courts, pre-sentence reporting, probation, parole, detention home management, the role of citizens' groups, as well as the many other related aspects of the correctional cycle.

For further information write: Raymond B. Marsh, general chairman, Tallahassee, Fla.

MORRIS KLAPPER NEW N.A.M.H. ASSISTANT PROGRAM DIRECTOR.—Morris Klapper, M. A., has been appointed assistant executive director in charge of program for the National Association for Mental Health.

For the past 13 years Mr. Klapper has been involved in various phases of social work in the areas of administration, community organization and program, his most recent position being that of executive director of United Cerebral Palsy of New York City.

AUSTRIAN MEDICAL SOCIETY OF PSYCHOTHERAPY.—The 8th annual meeting of the Austrian Medical Society of Psychotherapy was held January 28, 1958, at the Policlinic of Vienna. The following officers were elected: president, Prof. Viktor E. Frankl, M. D., Ph. D.; vice-president, Dozent Karl Nowotny, M. D.; councillors, Profs. Otto Poetzl, Hans Hoff, and Erwin Stransky.

Frederick Hacker, M. D., chief of staff, Hacker Clinic, Beverly Hills, Cal., read a paper on "Ego Psychology."

FOURTH INTERNATIONAL CONGRESS OF PSYCHOTHERAPY.—The 4th International Congress of Psychotherapy will be held September 1-7, 1958, in Barcelona, and is or-

ganized by the Sociedad Española de Medicina Psicosomática y Psicoterapia.

The main theme of the congress will be "Psychotherapy and Existential Analysis" with a study of the psychotherapeutic possibilities of the existential concept. The symposia and group meetings will cover such varied aspects of psychotherapy as: Influence of Oriental Psychology on Present Psychotherapy; Psychodrama; Group and Child Psychotherapy; Hypnosis; Psychotherapy and Religion. The reports of the plenary sessions will be simultaneously translated into Spanish, English, French and German.

For details of registration, remittance and accommodation, write: Dr. Ramon Sarro, president, Casanova, 143, Barcelona, Spain.

RORSCHACH SEMINARS, UNIV. OF CHICAGO.—Two workshop seminars in Rorschach testing will be held during July 1958, at the Univ. of Chicago as follows:

1. *The Foundations.* Technique of administering demonstrated. Processing the responses into the scorings. Psychologic significance of the separate test variables, and their interrelations in shaping the whole personality. July 7-11, 1958.

2. *Advanced Clinical Interpretation.* Some typical diagnostic problems in the psychiatric clinic. Children and adults, varying in degrees and kinds of disorder. The test's solutions, and its indications for treatment, both as to amount and goals. July 14-14, 1958.

Dr. S. J. Beck will conduct both seminars. For information write: Rorschach Workshops, Department of Psychology, University of Chicago, Chicago 37, Ill.

NORTH PACIFIC SOCIETY OF NEUROLOGY AND PSYCHIATRY.—The annual convention of the North Pacific Society of Neurology and Psychiatry will be held April 11-12, 1958, at the Empress Hotel, Victoria, B. C. Guest speakers will be Dr. Augustus S. Rose, professor of neurology, University of California School of Medicine, Los Angeles, and Dr. Brock Chisholm, president, World's Federation for Mental Health and former director of the World Health Organization.

For further information address Robert M. Rankin, M. D., secretary-treasurer, 1621 South West 152nd St., Seattle 66, Wash.

TRAINING FELLOWSHIP, NEW YORK CITY.—New York University-Bellevue Medical Center is offering a 3-months training fellowship with stipend in neuro-anatomy and neurophysiology, beginning September 1958.

For further information apply to: Dr. Louis Hausman, Department of Anatomy, New York University-Bellevue Medical Center, 550 First Avenue, New York 16, N. Y.

VIRGINIA BEYER MEMORIAL LECTURE.—The Department of Psychology, Springfield (Maryland) State Hospital, announces that the Virginia Beyer Memorial Lecturer for 1958 will be Morris S. Schwartz, Ph. D. His subject is: "The Mental Hospital—Institution in Transition." The lecture will take place on April 25. The Springfield Hospital Women's Auxiliary is sponsoring the lecture and there will be no registration fee.

For further information write: Dr. Michael H. P. Finn, Springfield State Hospital, Sykesville, Md.

MEDICAL EDUCATION WEEK.—Medical Education Week will be observed again, for the third successive year, April 20-26. The general objectives are to develop public understanding of the progress, aims and problems of medical education with the hope of stimulating its more adequate financial support by the public.

Emphasis will be centered on the challenges and problems confronting medical education in the dynamic current setting, together with the continuing need for facilities, personnel and financing essential to the further pursuit and application of medical knowledge, if medicine is to continue to make maximum contributions toward full utilization of the nation's health resources.

TREATMENT OF MENTALLY ILL IN GENERAL HOSPITALS.—Dr. Charles K. Bush is quoted in the Bulletin of the Connecticut State Department of Mental Health, January 1958, to the effect that since the end of World War II the number of general hos-

pitals offering inpatient treatment of the mentally ill has increased by 68%.

Dr. Bush added that of the 584 general hospitals which now admit mental patients, 223 report that they place them in regular medical or surgical wards. At the end of World War II there were 176 general hospitals that admitted mental patients.

A number of hospitals reported that they could use "many more" beds for psychiatric cases and a few said that their psychiatric units were not paying their way because of insufficient patients.

The average length of stay for mental patients in general hospitals ranged from 20 to 30 days. The majority of hospitals reporting said daily costs were between \$15 and \$22, but some were as high as \$45.

DR. REISS APPOINTED DIRECTOR OF RESEARCH AT WILLOWBROOK STATE SCHOOL, STATEN ISLAND.—Dr. Paul H. Hoch, Commissioner of Mental Hygiene, has announced the appointment of Dr. Max Reiss of Great Britain as director of research at Willowbrook State School, Staten Island.

Dr. Reiss will organize and direct a new unit to conduct research in mental retardation, combining the techniques of clinical psychiatry, biochemistry and endocrinology. The unit will be made up of scientists from several disciplines.

A noted psycho-endocrinologist, Dr. Reiss has been active in research work for the past 18 years. He is a fellow of the Royal Society of Medicine; vice-president and founding member of the Psycho-Endocrine Association; a founding member of the Society for Endocrinology; and a member of the Royal Medico-Psychological Association, the Biochemical Society, British Medical Association, and Society for Experimental Biology.

EASTERN GROUP PSYCHOTHERAPY SOCIETY.—The final meeting in the series dealing with sources of conflict in contemporary group psychotherapy will be held by the Eastern Group Psychotherapy Society on Friday, April 18, at 8:30 p. m., at the New York Academy of Science, 2 East 63rd Street, N. Y. C.

Conflict around the place of psychoanalysis in the group will be discussed by Milton M. Berger, M. D.; that around the concept of group dynamics will be presented by Emanuel K. Schwartz, Ph. D.; Asya Kadis will speak on the alternate meeting; and William Furst, M. D., will compare homogeneous and heterogeneous groups. The meeting is open to the professional public.

AMERICAN BOARD OF PSYCHIATRY AND NEUROLOGY, INC.—It is the intention of the American Board of Psychiatry and Neurology, Inc. to undertake Special Foreign Certification of physicians who are not residents of the United States or Canada, not holding licensure for the practice of medicine in those countries and not contemplating medical practice in those countries, by a certifying examination after completion of prescribed requirements. For details and regulations, write to the Secretary-Treasurer, American Board of Psychiatry and Neurology, Inc., 102-110 Second Avenue, S. W., Rochester, Minn.

ERNEST JONES.—The death of Ernest Jones on February 11 removes the last of the original members of Freud's inner circle, and the world's most prominent exponent of psychoanalysis. He was in his eightieth year.

Only last year he completed his monumental biography of Freud. Particularly striking was the fact that in the third volume he could describe so realistically the progress of the disease in Freud's last days, himself suffering from the same malady as that which took the life of the man to whom he had given such devoted service.

A more extended memorial of Ernest Jones will appear in a later issue of this JOURNAL.

FIFTH INTERNATIONAL CONGRESS OF INTERNAL MEDICINE.—The world's largest international gathering of scientists and clinicians concerned with internal medicine will take place in Philadelphia on April 24-26 at the Fifth International Congress of Internal Medicine. Dr. T. Grier Miller, Philadelphia, the Congress President, reports that in addition to America's leading internists, 81 foreign speakers representing 27 other nations will participate in the Congress' scientific program. Among these will be leading physicians from the Soviet Union, Czechoslovakia, Hungary, Rumania, and Poland. In announcing their participation, Dr. Miller said, "We are particularly pleased at the acceptance by these physicians of our invitation to join us at this International Congress. Their participation emphasizes that medical science knows no geographical or political barriers. It also represents immediate voluntary and professional implementation of President Eisenhower's invitation given in his recent State of the Union Message to the Soviet Union to join with us in cooperative medical research for the betterment of the health of mankind throughout the world." The speakers from the Soviet Union will deal particularly with cardiovascular disease.

The scientific program will feature a number of panels and symposia, dealing with anticoagulant therapy, cardiac diseases, vascular diseases, hematology, the medical aspects of cancer, synthetic steroid compounds used in rheumatoid arthritis, gastroenterology, endocrinology and diabetes, cardio-vascular surgery, current management of tuberculosis and rehabilitation.

There will also be special lectures by world-renowned speakers.

For further information write Mr. E. R. Loveland, Secretary-General, Fifth International Congress of Internal Medicine, 4200 Pine St., Philadelphia 4, Pa.

BOOK REVIEWS

THE NEUROLOGIC AND PSYCHIATRIC ASPECTS OF THE DISORDERS OF AGING. Proceedings of the Association for Research in Nervous and Mental Disease. Vol. XXXV, 1955. Edited by Joseph Lacle Moore, M.D., H. Houston Merritt, M.D., and Rollo J. Masselink, M.D. (Baltimore: Williams & Wilkins Co., 1956, pp. 307, 79 Ill., 17 Tables. \$8.50.)

The scientific advances of the past half century have resulted in a substantial addition to the average life span. Accordingly, there has been a corresponding increase in the proportion of the population over 65. With this growing aging population long term disorders, especially those classed as degeneration in origin, have taken on an added significance. For these are the major diseases of old age. Furthermore, the most dramatic and catastrophic episodes result from tissue collapse involving chiefly the vascular and nervous systems.

The current volume is a verbatim record of deliberations of 25 top ranking authorities as they critically analyzed the present concepts of the neurologic and psychiatric aspects of the disorders of aging.

The reader will find here the views of Lansing on the "Biology of Aging of Cells." Paul Weiss describes "The Life History of the Neuron."

Detailed comments on "Brain Metabolism" and "Blood Flow" by Harold E. Himwich, Williamina A. Himwich, and Seymour Kety offer recent experimental data of basic importance.

In the carefully documented report by Joseph M. Foley, "Hypertensive and Arteriosclerotic Vascular Disease of the Brain in the Elderly," sharp issue is taken with the current interest in "little strokes." According to Foley, the practice of explaining a number of obscure clinical problems, such as a drop in blood pressure or a confusional episode or a gradual dementia as the result of a "little stroke," is a grave disservice for the patient. In truth, "little stroke" is a symptom and appears when a patient has had a lacunar infarct.

Warren Andrew presents a chapter on "Structural Alterations with Aging in the Nervous System." Evidence of nerve cell degeneration and the tendency to repair is presented together with a number of excellent photographs. It should be added that some difference of opinion appears in the discussion of the significance of the morphological changes within the cells as interpreted by Andrew.

Contributions by I. Lorge, Clive McCay and Malamud with those of MacDonald Critchley and Howard Rusk add to the value of this report.

The final chapter is a panel discussion on "The Physician's Contribution to the Role of Older Persons in Society" with D. Ewen Cameron as chairman, and several top ranking authorities who discuss particular phases of the place and influence

of older people in society, and how the elderly may be guided by understanding physicians.

The comments by J. S. Tyhurst and D. S. Sargent on "Retirement" are especially illuminating.

The careful reading of the small volume is a rewarding task. It is highly recommended.

EDWARD L. BORTZ, M.D.,
Philadelphia, Pa.

TREATMENT OF HEART DISEASE: A CLINICAL PHYSIOLOGIC APPROACH. By Harry Gross and Abraham Jaser. (Philadelphia & London: W. B. Saunders Company, 1956.)

It was difficult to review this excellent book. Everytime it was shown to a doctor he wanted to borrow it for a "few days" (which meant a few weeks). This occurred and with good reason three or four times.

As the title indicates, this book deals with much more than treatment. It includes physiology, symptoms, and diagnosis as well, all in an understandable language with absolute lack of padding. It is perhaps equally suited to general practitioners and specialists. If anything it favours the general practitioner.

The first chapter is on physiology. It discusses the various methods of measuring cardiac output, very briefly and clearly gives the author's opinion of each method. This principle is followed throughout the book. This chapter does not go into the causes of hypertrophy and dilatation. It deals only with the points that bear on failure. The discussion on forward *vs* backward failure is interesting but complicated showing that neither is 100% true. Physiology reappears all through the book.

The discussion on digitalis is full but concise. It occupies a whole chapter as does quinidine.

The fourth chapter, 38 pages, deals with the "arrhythmias." The treatment of paroxysmal tachycardia occupies over 9 pages. It is detailed and tells the various successive measures to take, followed by a summary. The summary of the handling of a case of rapid arrhythmia is especially practical.

Every general practitioner should read the chapter on the treatment of congestive failure. The three important factors in the treatment are digitalis, salt restriction and mercurial diuretics, other measures are only of slight help.

There is a valuable chapter on diet, with many menus of various low salt diets with recipes. It suggests that salt restrictions are overdone in practice. The first sentence in the failure summary is, "A special diet is required by a small portion of cardiac subjects, a salt restricted diet for those in heart failure and an almost salt free diet for those with severe hypertension." With improvement it recommends increasing from 0.5 to 1 mg diet to a 2.5 one.

Failure to make this increase often results in in-anition resembling cancer.

The chapter on hypertension recommends Apresoline and Rauwolfia as the safest combination of drug therapy, only however for selected cases. It concludes the summary of treatment by stating that "where there is no response to medical care, reassurance, rest, etc., diet (low sodium) and autonomic blocking agents *may* be prescribed with benefit."

Chapter 9 on hypertensive and arteriosclerotic heart disease is complete and detailed.

In the chapter on rheumatic fever, the authors do not express their opinion of the comparative value of salicylate and steroid therapy. The important indications for mitral commissurotomy are advancing disease with failure or near failure, evidences of high pulmonary pressure (haemoptysis, dyspnoea, acute pulmonary oedema, dilated pulmonary artery, etc.) as well as evidence of high pulmonary capillary pressure on catheterization which is recommended when the above evidences are absent or uncertain. The contraindications to operation mentioned are: (1) Well marked mitral insufficiency, (2) Large left ventricle, especially with mitral systolic murmur, (3) Aortic valve disease, (4) Active rheumatic infection, (5) Myocardial insufficiency, (6) Subacute bacterial endocarditis. The postoperative treatment is most detailed and comprehensive. Left pleural effusion is not mentioned.

It is a little disappointing that in the discussion on valvular disease there is no separate space given to iricuspid stenosis.

Modern laboratory methods (angiocardiography, arteriography, (aorta and peripheral arteries) and cardiac catheterization are discussed and their diagnostic use evaluated, especially in congenital heart disease which is covered in a rational and lucid fashion.

The remainder of the book deals with heart disease in pregnancy, cardiac trauma, the heart in hypo- and hyperthyroidism, and beriberi, neuroses (effort syndrome) and various problems of rehabilitation.

This is a very satisfactory book on the treatment of heart disease and is to be highly recommended.

JOHN A. OILLE, M.D.,
Toronto, Ont.

PSYCHOPHARMACOLOGY. Edited by *Nathan S Kline*. (Washington D. C.: American Association for the Advancement of Science, Publication No. 42, 1956. \$3.50.)

This book, with a foreword by Winfred Overholser, consists of discussions of a number of studies of clinical effects of ataractic drugs together with a brief consideration of the action of certain psychotomimetic agents. Thus there are three papers on clinical applications of chlorpromazine—one by Lester Margolis, Ames Fischer, Robert N. Butler, and Alexander Simon, another by Vernon Kinross-Wright, and one by Anthony A. Sainz. Sainz also has a paper on considerations of the cerebral action of reserpine. Nathan Kline and A. E. Bennett report their respective therapeutic investigations

using reserpine. Leo Hollister, Leo Traub, and Wallace Bechman describe a study they made of the actions of reserpine and chlorpromazine using the technic of double-blind controlled studies, while Herman Denber and Sidney Merlis present investigations on antagonism between effects of mescaline and chlorpromazine. An interesting paper by Frederick H. Myers deals with the pharmacology of chlorpromazine, reserpine, and related drugs, and the volume is concluded with a chapter by Murray E. Jarvik on the mechanism of action of lysergic acid diethylamide, serotonin, and related compounds. Discussions follow each of the groups of papers. These have been edited in such a way as to reflect some of the lively impact of the symposium which was organized by the Medical Sciences Section of the American Association for the Advancement of Science and The American Psychiatric Association in 1954.

The work reported is therefore three years old and many rapid advances have taken place in psychopharmacology since. This is especially so in connection with mechanisms of action of drugs such as LSD and serotonin, about which a number of papers have appeared in the last two years. There have also been many further clinical reports of the action of reserpine, chlorpromazine, and other tranquilizers. In connection with studies in this volume, one is struck with the fact that most of them did not involve double-blind procedures but consisted of giving patients tranquilizing drugs and observing their behavior before, during, and after medication. One wishes for more adequate placebo controls and rating scale evaluations. Several of the papers suggest the view that apparently schizophrenia, even of long-standing, may be modified directly by the drugs aside from their action in decreasing anxiety and in making disturbed ward patients more manageable. The greater accessibility of patients to psychotherapy and other forms of treatment, following administration of chlorpromazine and reserpine, is the major contribution of these tranquilizers.

The volume is small and readable. It will also prove to be historically interesting since it contains articles by some of the early contributors to the field of psychopharmacology, a subject which seems destined to play a considerable role in psychiatric medicine in the coming years.

HUDSON HOAGLAND, PH.D.,
Worcester Foundation for
Experimental Biology,
Shrewsbury, Mass.

THE ANNUAL SURVEY OF PSYCHOANALYSIS. Vol. III. Edited by *John Frosch*. (New York: International Universities Press, pp. 682. \$10.00.)

An annual survey must first be judged by the selection it makes. A close adherence to the original concepts evolved by Freud, the salient feature of the present volume, is discernable in the likemindedness of the authors and the homogeneity of the material covered.

However, psychoanalysis can no longer be identi-

fied with the writings of this one group of psychoanalysts regardless of its size. Other groups, building on Freud's fundamental discoveries, have continued empirical inquiry and the necessary reformulation of Freud's theories much the same way as Freud himself had continuously reformulated his own concepts. Which of these diverse developments will prove more scientific and fruitful remains to be seen.

Within the self-imposed but not stated limitations, however, the volume has been well prepared and presented. The topic divisions such as Critique and Methodology, Ego Psychology and Instinct Study, Clinical Studies, Psychoanalytic Therapy, etc. are well conceived, and the relationship of material in the various categories established without unnecessary overlapping.

The editors have presented not merely an abbreviation or synopsis of the original publications, but have mastered the contents and then reformulated them into a unified whole. The reader thus is able to get the feeling of the original article.

The book is free from obscurities; the style highly readable. Where different authors participate, they are not all even, but the general level of presentation is excellent. An excellent reference book, this volume fills the need for a digest of this particular segment of psychoanalytic literature.

HENRIETTE R. KLEIN, M. D.,
New York City.

CULTURE, PSYCHIATRY AND HUMAN VALUES: THE METHODS AND VALUES OF A SOCIAL PSYCHIATRY. By Marvin K. Opler. Foreword by Thomas A. Rennie. (Springfield, Ill.: Charles C Thomas, 1956. 260 pp. \$6.00.)

This is a tightly-written study in which both its author and the social sciences can justly take pride. Combining rigorous scholarship and philosophical breadth, it integrates psychiatry and anthropology, taking the best from each and weaving them together into a theoretical framework of great strength and insight.

Dr. Opler has an extraordinary command of the literature; he is also experienced in the clinic and the field. This experience and understanding leaves him unsympathetic to exaggerated claims of the significance of "determinants" or to any other form of naive reductionism.

He rejects abstraction as impossible, for in his view elements are incapable of retaining their identity once removed from their fields: "the great danger . . . is to so abstract the individual from his meaningful cultural background that he ceases to be a responsive or live subject."

It follows that he also rejects polarity between personality and culture, and sees one simply as an aspect of the other: the forest is defined by its trees, and the tree can be understood only as a forest tree, defined by its place in the forest. Personality and culture therefore become merely different loci in one field where the observer himself, with his own background and interests, is also a factor. In this Opler resembles Sapir who wrote:

"These two poles of our interest in behavior do not necessarily make use of different materials; it is merely that the locus of reference is different."

In this system, in spite of "the fear, in social science and psychiatry, of dealing with values-systematizations, as if man were merely the prey of irrational and psychological forces," values are inescapable, and if we ban them at the front door, we admit them unawakened and therefore uncritically at the back-door.

In the reviewer's opinion, the passages on cultural influences in psychosis are the weakest in this book, though this is no reflection on Dr. Opler, for available data are unsatisfactory. For example, *latah* exists, but field acquaintance with it reveals something far more variable and complex than published accounts suggest. Similarly, we know *windigo* not so much from Algonkian definition as from European definition, the two being different. As for *arctic hysteria*, I doubt that it has any existence apart from our literature. What we need is first-hand, detailed accounts of psychosis in preliterate societies—and soon, before these tribes are gone.

EDMUND CARPENTER, PH. D.,
Department of Anthropology,
University of Toronto

HALSTED OF JOHNS HOPKINS, THE MAN AND HIS MEN. By Samuel James Crowe, M. D. (Springfield, Ill.: Charles C Thomas; Oxford Eng.: Blackwell Scientific Publications Ltd.; Toronto: The Ryerson Press, 1957.)

William Stewart Halsted (1852-1922) was one of the "Four Doctors" who founded the Johns Hopkins Medical School that revolutionized medical education in America. This group—Welch, Osler, Halsted and Kelly—together with a number of hand-picked associates constituted an unrivalled galaxy of talented men who were responsible for the period that Flexner called the "Heroic Age of Medicine." It embraced the decades on either side of the turning from the 19th to the 20th century.

Dr. Crowe was a member of Halsted's staff from the time of his graduation in medicine in 1908, and had intimate knowledge of the men in the department of surgery that the Chief had built up. He was therefore eminently fitted to write not only about Halsted but also about the remarkable group that he surrounded himself with. The death of Dr. Crowe, who was professor emeritus of laryngology and otology, occurred only a fortnight after he had completed the manuscript of this book.

Having been a part of the Hopkins medical faculty throughout his professional career the author was able to draw on his personal knowledge for details, significant and often extraordinary, in the lives and work of his associates during those early pioneer days. His book makes fascinating reading.

The founding of the Johns Hopkins University, the Johns Hopkins Hospital and the School of Medicine was provided for by Mr. Johns Hopkins, a Baltimore merchant, in the will he signed in 1870.

Thus for the first time in America medical education became an integral part of a university program. The foresight of Mr. Hopkins in this planning is especially noteworthy.

When 29 years old Halsted, then on the staff of the College of P. and S. in New York after 2 years postgraduate study in Europe, performed what the author says was "probably the first successful direct blood transfusion in America." His sister was in a state of collapse from post-partum haemorrhage. Drawing blood from one of his own veins, he injected it into hers. "This was taking a great risk," he wrote in one of his letters, "but she was so nearly moribund that I ventured it, and with prompt results." His first gall-stone operation was done a year later. The case was that of his mother who was in a serious condition. After the consultants failed to take action, the youthful Halsted decided to act. He opened the pus-filled gall bladder and removed 7 stones. The patient recovered.

From his work in New York hospitals, Halsted was called to Baltimore to work in the pathological laboratory of William H. Welch, the first medical officer appointed to the Johns Hopkins Hospital and Medical School. In 1890 Halsted was made surgeon-in-chief to the hospital and in 1892 professor of surgery in the medical school. It was soon apparent that his extraordinarily meticulous technique was superior to anything hitherto witnessed in Baltimore.

Halsted knew how to pick his assistants, and, once appointed he left them pretty well on their own. John M. T. Finney, his earliest assistant, who became one of America's most eminent surgeons, reported that from his first day on duty until Halsted's death 33 years later the Chief never said a word to him about what he wanted him to do, or how he wanted it done.

Crowe reports that of the 238 surgeons trained by Halsted only 99 are in private practice, the remainder being in full-time university work.

When Harvey Cushing, a Harvard graduate in medicine, applied for a position on Halsted's staff in 1896, the Chief told him that if he cared for a place before autumn he could probably take him on, but thereafter only Hopkins graduates would be accepted. Cushing came, and Halsted had no reason to be sorry.

Early he began to select men on his staff to develop various sub-departments of surgery. Joseph C. Bloodgood was the first. To him Halsted assigned the task of a thorough and systematic study of all tissues removed at operation. Thus originated the specialty of surgical pathology. "Later in his apparently casual way Halsted steered Baetjer into roentgenology; Cushing and then Dandy into neurosurgery; Young into urology; Bear into orthopedics and Crowe [author of this book] into otolaryngology."

Three things in special are to be said about Halsted in relation to his men: 1. Like the sculptor who sees in the marble the figure that is to emerge under

his hand, Halsted's uncanny insight recognized among his juniors the men who would excel: 2. His marvellous technique and surgical example set for his assistants an exceptional pattern that they were bound to follow; 3. He rejoiced in their success and their eminence and paid full tribute to their achievements. For example, Hugh Young had become known for his skilful technique in perineal prostatectomy. Seeking Halsted's advice one day as to the advisability of operation in a case of cancer of the prostate, the Chief not only supported his proposal but served as Young's first assistant at the operation. At a national urological meeting, a New York doctor remarked, "The prostate makes most men old, but it made Hugh Young."

A major feature of surgical instruction at Hopkins was a course in experimental surgery on animals. Halsted initiated this course and gave it to the first class enrolled in their third year (1895). This experimental course was later turned over to Cushing who conducted it brilliantly. The example was soon followed in other medical schools. Dr. Crowe describes Cushing as "a perfectionist in every sense of the word—a true disciple of Halsted and a master technician." He was Cushing's resident for several years and found him, as did others who had worked with him, a hard task-master.

Chapters in this book are devoted to the various members of Halsted's staff. Special accounts are also provided of certain of Halsted's more important operative procedures.

The men whom he started on their careers reached the top of their new and specialized professions. Young is the father of urology as Cushing is the father of neurosurgery. Similarly, Baer pioneered in orthopedic surgery and Baetjer pioneered in radiology. That was in the early days when the dangers of exposure to X-rays were not understood. In consequence, Baetjer lost an eye and most of his fingers and developed malignancy of the axillary glands. He died at 59 a martyr to science.

An entertaining incident occurred at a Medical Board meeting (1912) when Halsted proposed combining laryngology and otology in one department under Samuel Crowe, a member of his staff but who was only 4 years out of medical school. Halsted had not consulted the senior men, who were doing the work in these two clinics. Howard Kelly was annoyed. He pounded the table in vigorous disapproval, whereupon Halsted began a profuse, slightly histrionic apology for his rash action. He kept on apologizing, but without withdrawing his recommendation, till Kelly again interrupted—"Halsted, stop it. I'll vote for it."

Alfred Blalock, who succeeded Halsted as professor of surgery and who had persuaded the author to write this absorbing story of the Heroic Age of Medicine at Johns Hopkins, writes the Preface, and to him Dr. Crowe wished to dedicate his book. It is illustrated.

C. B. F.



MELVIN M. JOHNSON

IN MEMORIAM

MELVIN MAYNARD JOHNSON, A. B., LL. D., 1871-1957

The death of Melvin Maynard Johnson on September 18, 1957, brought to a close the life of a great American. He was a born leader who dedicated his unusual talents to the promotion of human welfare. And his passing will be mourned most deeply by a Boston Scottish Rite Masons in North America and by thousands of psychiatrists and mental health workers in the United States and Canada.

Thanks to the vision and courage of Melvin Johnson, there was developed in 1934 a partnership between Scottish Rite Masonry and American psychiatry—a partnership that has made possible signal advances in our understanding of the nature of schizophrenia—and a partnership that promises to be still more fruitful in the years that lie ahead.

The story of this partnership is of interest to those of us who look to research to solve eventually many of the problems that confront us in psychiatry and in medicine generally. Briefly, this is the story.

In 1933, Melvin Johnson, a distinguished Boston lawyer became the Sovereign Grand Commander of the Scottish Rite Masons of the Northern Jurisdiction of the United States. Shortly after he assumed his new responsibilities, he made a study of the ways in which the benevolent funds of his Jurisdiction were being spent. This study revealed that worthwhile projects were being financed but that more could be done to promote human welfare if he could discover a major project that might be of significance to mankind throughout the world. In his search for such a project he consulted representatives of the National Committee for Mental Hygiene (now the National Association for Mental Health). He asked these representatives such questions as the following: "What is the greatest problem in your field?" The answer was dementia praecox. Then he asked "What is the degree of prevalence of dementia praecox?" The answer was to the effect that approximately 25% of all occupied hospital beds in North America were filled with individuals suffering from

this disability. Commander Johnson then asked the proportion of cases that got better. The answer was from 10 to 15%, or even less. Then he asked "What do we know about the intrinsic nature of dementia praecox?" The answer was "very little." He posed another question: "Is not dementia praecox a major field for research?" The answer was "yes, but that no disability in the entire field of medicine was more complex and that research to be effective must be of long duration and must entail investigative studies from many angles."

It is a measure of the stature of Melvin Johnson that the magnitude of the problem of dementia praecox and the difficulties involved in research whetted his appetite for action, and he made the following proposals: 1. that there be set up a Committee on Research in dementia praecox sponsored by The Supreme Council 33° Scottish Rite Northern Masonic Jurisdiction, U.S.A., under the auspices of the National Committee for Mental Hygiene; 2. that this Committee be composed of outstanding men representing psychiatry and allied disciplines, together with representatives from the Supreme Council 33° Scottish Rite Northern Masonic Jurisdiction; 3. that an able psychiatrist be appointed as field director on a part-time basis to travel throughout North America to discover promising research projects in suitable settings that needed additional funding and that might be considered by the Committee on Research in Dementia Praecox; 4. and that he (Melvin Johnson) would attempt to get the consent of his colleagues in the Supreme Council to vote annual grants to be expended by the Committee on Research in Dementia Praecox.

These proposals of Melvin Johnson were implemented within a matter of weeks. Dr. Arthur Ruggles became the first chairman of the Research Committee to be followed a number of years later by Dr. Winfred Overholser. The first field director was Dr. Nolan Lewis, and he was succeeded later by Dr. William Malamud.

It became the policy of the Committee to expend its resources in such a way that an impetus would be given to the funding of many promising projects with individual annual grants not to exceed from six to eight thousand dollars. Because of the intensive appraisal of each project, other donors were attracted to support the research undertakings that commended themselves to this Committee on Research in Dementia Praecox. In other words, the annual grants from Scottish Rite were essentially for pump priming—pump priming that has attracted many millions of dollars during the last 24 years.

At the present time, the Committee on Research in Dementia Praecox is funding 27 projects. Over the years, it has funded 62 projects, at a total cost of \$1,365,000.00. With the election of Judge George E. Bushnell in 1954 to succeed Melvin Johnson as Sovereign Grand Commander of the Northern Jurisdiction, the annual appropriation was augmented. In 1958, \$125,000 will be expended; and Judge Bushnell is securing the partnership of Scottish Rite Masons of the Southern Jurisdiction of the United States and of Canada as well—with a total membership of a million men in North America. These men, as they become more interested in research in schizophrenia are a great existing and potential force in forwarding progress in the whole field of mental health.

The Committee on Research in Dementia Praecox (now the Committee on Research in Schizophrenia) has discovered that there are tremendous advantages in having a Committee composed of both scientists and laymen. The laymen raise pertinent questions that keep the scientists on their toes in the appraisal of research projects. Melvin Johnson was right when he proposed a genuine partnership with Scottish Rite, rather than Scottish Rite merely granting funds for research.

The research funded by the Committee has centered largely on genetics, on child growth and development, and on the biological and psychological sciences as regard to the disease (schizophrenia) itself as it has already developed. Significant contributions have been made to the fundamental sciences

that have relevance, not only to schizophrenia, but to medicine generally. While the riddle of schizophrenia of course has not been solved, great forward steps have been made in regard to a better understanding of this condition, and promising leads for further research have been opened up. Unquestionably, the Committee has played a prominent role in fostering this progress.

At a recent meeting of the Committee, Melvin Johnson referred to his own contribution in these words—"I was building a foundation. I was not building the building itself and it is you, my successors, who are building the building and making the people conscious of what we are doing and how they should share."

This great American was born in Waltham, Mass. May 11, 1871, the son of Byron B. Johnson, the first mayor of the City of Waltham. He graduated in law from Boston University Law School in 1895. He became Professor at Boston University Law School in 1920-1935; Dean, 1935-1942; and Dean Emeritus, 1942. He was honored with the degree of LL. D. from the University of Vermont in 1936. He also received honorary degrees from Marietta College (Ohio) in 1941; Illinois Wesleyan University in 1949; Tufts College in 1949; and from Boston University. In addition, he was elected a Fellow of the American Academy of Arts and Sciences in 1938, and an Honorary Member of The American Psychiatric Association in 1940. Melvin Johnson was also a member of the Board of Directors of the National Association for Mental Health.

He died at his home in Boston, Mass., on Wednesday, December 18, 1957. He had been in failing health following a heart attack which hospitalized him in London, England, in late March as he and his wife were beginning a vacation in Europe.

The passing of Melvin Johnson is a reminder of what psychiatry owes to such laymen as Clifford Beers and himself. The work of both men lives after them. They built, not alone for today, but for future generations. The world is richer for their living.

CLARENCE M. HINCKS, M. D.,
Toronto, Canada.

THE RELATION OF CHILDHOOD BEHAVIOR PROBLEMS TO ADULT PSYCHIATRIC STATUS: A 30-YEAR FOLLOW-UP STUDY OF 150 SUBJECTS^{1,2}

PATRICIA O'NEAL, M.D., AND LEE N. ROBINS, PH.D.³

INTRODUCTION

There have been few studies which have followed children with behavior problems long enough to evaluate their adult psychiatric status^(1, 2, 3, 4). Those which have followed children over a considerable period have sometimes evaluated their status at follow-up on the basis of a single criterion, for example, the proportion who have had legal difficulties during the follow-up period^(5, 6). Without studies of their total psychiatric health as adults, it is difficult to evaluate therapy with disturbed children or the effects on them of manipulation of environment. Some reports claim that most childhood problems disappear with maturation⁽⁷⁾; others, presenting similar figures for improvement, attribute the improvement to intervening therapy⁽⁸⁾. To establish any sort of baseline for the expected outcome of childhood behavior problems, there must be available 1. a group of patients who have been thoroughly studied as children, 2. an opportunity to study them again as adults, 3. a control group of normal children who can be studied as adults in the same way as the patients. A control group permits distinguishing between psychiatric problems that arise independently of the original childhood problems and those attributable to a continuation of the original difficulty.

A follow-up study that meets these requirements is now in progress, utilizing the records of the St. Louis Municipal Psychiatric Clinic from the years 1924 through 1929, a matched control group of normal children, and detailed interviews with both patients and controls as adults.

¹ Read at the 113th annual meeting of The American Psychiatric Association, Chicago, Ill., May 13-17, 1957.

² Funds for this project have been provided by the Foundation's Fund for Research in Psychiatry and the United States Public Health Service, Grant Number M-1400.

³ From the Department of Psychiatry and Neurology, Washington Univ. School of Med., St. Louis, Mo.

DESCRIPTION OF THE STUDY

The present report is concerned with the psychiatric diagnosis of 150 subjects seen in connection with the larger study. The larger study involves a follow-up of a consecutive series of 524 patients seen at the St. Louis Municipal Psychiatric Clinic between 1924 and 1929, and a comparison of their adult psychiatric and social status with that of 100 control subjects selected from the records of the St. Louis public schools.

Between January 1, 1924, and December 31, 1929, 2,505 patients were referred to the Municipal Psychiatric Clinic. Referrals came from the Juvenile Court, social agencies, schools, physicians, and parents. Children thus referred were given at least Stanford-Binet intelligence tests, a physical examination, including routine laboratory tests, an extensive social history and history of problem behavior taken from a related adult or the referring agency, and psychiatric examination. Only rarely was treatment undertaken. The clinic served primarily as an advisory agency to the source of referral. In most cases, records are extremely detailed. Only 524 of the patients referred, however, met the following criteria: 1. age 17 years or less at first clinic contact; 2. I.Q. not less than 80 (measured by Stanford-Binet); 3. Caucasian race; 4. referral because of problem behavior (not purely for placement or vocational advice), and 5. adequate work-up by the clinic staff. All who met these criteria were accepted as patient subjects.

A control group of 100 subjects was selected from the records of the St. Louis public schools to match the patient series with respect to sex, race, year of birth, place of residence, and I.Q. They were also required to show no obvious behavior disturbances as indicated by repeating more than one grade, excessive absences, or transfer to correctional institutions.

At the time of writing, the records of all the patients and controls have been checked

through the St. Louis Social Service Exchange for a history of social agency contacts, through police and mental hospital records; 85% have been located; and 150 have been interviewed. The interview consists of a structured two-part questionnaire, which provides for both closed and open-ended questions. The questionnaire requires approximately 2½ hours to administer. The first part deals principally with the subject's social history and adjustment and is administered by the social interviewer. The second part consists primarily of a medical and psychiatric symptom review and is administered by a psychiatrist.

This paper will discuss the current psychiatric diagnosis of the first 150 subjects interviewed and the relation between their current diagnosis and childhood behavior problems.

CHARACTERISTICS OF THE 150 INTERVIEWED CASES

The group of the first 150 subjects interviewed contains 115 former patients of the Municipal Psychiatric Clinic and 35 control subjects. The patients interviewed so far are a representative cross-section of the total patient group with respect to sex, age, I.Q., socio-economic status, and nature of their childhood behavior problems. Both the total group of patients and the 115 reported in this paper are about 70% male (Table 1), came to the clinic at about age 13, had a median I.Q. score of 95, and come from a predominantly lower socio-economic background, with only 38% from white-collar families. They were also similar in the kinds of behavior problems they showed at the time of referral to the clinic. The patients have been divided into 3 groups on the basis of the description of their childhood behavior difficulties. Group I is the delinquent group, which includes any child who had experienced formal court action and had a court record when he was seen, regardless of other problems he might have. Delinquents make up 37% of the total patient group and 30% of the first 115 interviewed. Group II, the largest group, includes youngsters who had aggressive anti-social behavior similar to that which occurred in the delinquent group, but who had experienced no formal court action

TABLE 1
CHARACTERISTICS OF THE PATIENT GROUP

	Interviewed 115	Total patient group
Sex:		
Male	70%	73%
Female	30	27
	100%	100%
Median age at referral.....	12 yrs., 11 mos.	13 yrs., 6 mos
Median I.Q.	95	95
Breadwinner's occupation at time of referral:		
White collar	38%	38%
Labor, unemployed, unknown	62	62
	100%	100%
Type of behavior problem:		
Juvenile delinquent	30%	37%
Anti-social behavior	42	40
Neurotic	28	23
	100%	100%

at the time of referral. Like Group I, Group II patients had a history of theft, running away, truancy, assault, destruction of property, incorrigibility, and sexual misbehavior. Some of them were pre-delinquent; others had less frequent or less public misdemeanors than Group I patients. Group II patients account for 40% of the total patient group, and 42% of the 115 so far interviewed. Group III, the smallest group, contains children referred for problems considered neurotic rather than anti-social. Included here were difficulties in learning and attention, excessive dependency, fears, tantrums, tics, eating problems, enuresis, or "nervousness." Group III patients make up 23% of the total patient group and 28% of the 115 patients interviewed.

The following abridged case histories of 3 of the patients who have been interviewed may clarify the kinds of behavior problems assigned to each of the 3 groups:

Group I—Delinquent: A 14-year-old boy was referred from the House of Detention after being apprehended following an afternoon of "joy riding" in a "borrowed automobile." His I.Q. was 85. The family had been supported by the mother since he was 5 years old, when his father had deserted. This boy had always been difficult for his mother to discipline. At the age of 10, he began to truant from school. At the age of 11, he first ran away from home, and by age 12 was taking trips lasting a week or two. He first came to the attention of the

venile Court at the age of 12, when his mother made a missing persons report. His mother again brought him to Court at age 13 because she could no longer discipline him. He was charged as "incorrigible" and put on probation. Shortly before the "running" episode, he had been expelled from school following a fight with a teacher.

He was said to lie pointlessly for the "sheer pleasure of lying." His manner was described as negatively frank and disarming.

Group II—Non-delinquent, with aggressive antisocial behavior: A 12-year-old boy was referred to his aunt after the school had strongly urged that she seek some help for him. Despite an I.Q. of 123, his school performance had been erratic, and he had failing grades. He continually misbehaved at school in order to be the center of attention. He was truant at the age of 9. He had violent temper outbursts, during which he would throw things and strike people. For several years he had been stealing money from his aunt. He was reported to be "untruthful and dishonest about everything." During the past year he had threatened several times to kill everyone in the family and to kill himself.

Group III—Neurotic: An 8-year-old girl was referred by the school nurse. Her I.Q. was 106. Her parents were divorced when she was 5. The girl lived with her mother and maternal grandparents, all of whom were described as nervous, moody, and unstable. She had no particular learning problems at school but acted peculiarly in class. She interrupted the class by screaming without reason and dancing around the school room. She also had temper tantrums, during which she bit herself and other children.

The patients on whom this paper is based differ strikingly from the total study group in only two ways: 1. No cases of patients who have died are included. In the total group, 13% of the patients and 9% of the controls have died during the follow-up period. 2. Subjects who are still in St. Louis comprise a higher proportion of the first 150 interviewed than they do of the total group. In the total group, 58% of the patients and 76% of the controls are now in the St. Louis area. Of those already interviewed, 87% of the patients and 97% of the controls live in or near St. Louis.

RESULTS

The findings which this paper will discuss are 1. how many of the patients are psychiatrically sick or well at the time of follow-up; 2. how their adult psychiatric status is related to their childhood behavior problems; 3. how their adult psychiatric status is related to childhood home environment; and

4. how much psychiatric treatment they have received since their referral to the clinic. Results have not been treated statistically as this is a preliminary report.

Current Diagnosis.—Diagnosis of the patients, based on the medical and psychiatric history obtained by the psychiatrist during the second part of the interview, has been made according to the criteria listed in the *Diagnostic and Statistical Manual of Mental Disorder* (9). Each of 3 psychiatrists independently reviews the information obtained and makes a diagnosis. Differences in diagnosis are then discussed. At least 2 out of 3 must agree on a diagnosis before the patient is placed in that category.

While the criteria presented in the Manual are used for making positive diagnoses, it has been found more difficult to establish criteria for the "no psychiatric disease" and "undiagnosed" categories. A subject has been labeled "no psychiatric disease" only when he neither has nor has ever had 1. a group of symptoms that could be put into any of the standard diagnostic categories, 2. more than 3 symptoms which could possibly be construed as psychiatric symptoms, including vague somatic complaints, complaints of tension, and lability, or 3. even one symptom sufficiently disabling to cause him to seek medical help or to interfere with his work or desired activity.

A subject was labeled "undiagnosed" when he had more symptomatology than permitted under the criteria listed "no psychiatric disease," but 1. his symptoms fit none of the defined psychiatric entities, and 2. the 3 psychiatrists involved could not agree on a psychiatric diagnosis.

Among patients, 21% were found in the "no psychiatric disease" category, as compared with 60% of the control subjects (Table 2). Among the patients, 10% were thought to be psychiatrically ill but undiagnosed, and among the controls, 9% were undiagnosed. In both patient and control groups, there were 3% about whom insufficient information was available to make a judgment as to psychiatric health or illness. Among the patients, 27% were judged to be neurotic, 18% psychotic, 15% sociopathic personalities, and 3% alcoholic. Among controls, there was approximately the same pro-

TABLE 2
CURRENT DIAGNOSIS

	Patients	Controls
Neurotic reaction	27%	23%
Anxiety reaction	11%	9%
Conversion reaction	4	0
Depressive reaction	2	0
Undiagnosed neurosis	10	14
Psychotic reaction	18	3
Chronic brain syndrome	2	0
Schizophrenia	12	0
Manic-depressive	2	3
Undiagnosed psychosis	2	0
Sociopathic personality	15	0
Alcoholism	3	3
Other	3	0
Feeble-minded	1	0
Gross stress reaction	1	0
Personality disturbance	1	0
Undiagnosed	10	9
No psychiatric disease	21	60
Insufficient information	3	3
	100%	100%
	N = 115	N = 35

portion of neurotic reactions (23%), but only 3% psychotic, no sociopathic personalities, and 3% alcoholic. Clearly, the former patients produce many more psychiatrically ill adults than does a group of normal controls, and the increment is in the more seriously incapacitating psychiatric diseases.

Relation of current diagnosis to childhood behavior problems.—Group I, the former juvenile delinquent group, has the smallest proportion of well patients, 14% (Table 3). The single diagnostic category to which the former juvenile delinquents make the largest contribution is sociopathic personality, a diagnosis made in 37% of this group. A diagnosis of neurosis was made in 14% of this group, psychosis in 6%, alcoholism in 9%. In 11%, considered psychiatrically ill, no diagnosis could be made. It will be noted that Group I produced few adults with psychotic reactions. The relatively low rate of alcoholism refers only to those in whom alcoholism was the primary psychiatric syndrome. Many of those diagnosed sociopathic personality had excessive alcohol intake, but in a context of anti-social behavior which invaded most spheres of their lives.

Group II, those with anti-social behavior but no juvenile court record, has 19% with no psychiatric disease. This group contributes equally to neurotic and psychotic diag-

TABLE 3
RELATION OF CHILDHOOD BEHAVIOR PROBLEMS
TO CURRENT DIAGNOSIS

Current diagnosis	Classification by childhood behavior problems			Controls
	Group I (Delinquent)	Group II (Anti-social)	Group III (Neurotic)	
Neurotic reaction	14%	30%	37%	23%
Psychotic reaction	6	30	15	3
Sociopathic personality	37	6	3	0
Alcoholism	9	0	0	3
Other	3	4	3	0
Undiagnosed	11	11	6	9
No psychiatric disease	14	19	30	60
Insufficient information ..	6	0	6	3
	100%	100%	100%	100%
	N = 35	N = 47	N = 33	N = 35

nostic categories, with 30% in each. Only 6% were diagnosed sociopathic personality. It is interesting that all of those so diagnosed, while not juvenile delinquents at the time of referral to the clinic, did come before the Juvenile Court later. No cases of alcoholism were found in this group. The undiagnosed category accounted for 11%.

Group III, those with neurotic problems as children, produced the highest proportion of well adults among the patient groups, with 30% without psychiatric disease. This figure is still, however, substantially lower than the proportion well in the control group, 60%. Like Group II, Group III contributes substantially to the adults diagnosed neurotic (37%), but does not contribute so heavily to the psychotic group (15%). There is one sociopathic individual, but no alcoholics.

Differences between these 3 groups in the proportion of adults without psychiatric disease and in the proportions contributed to the various diagnostic groups indicate that the kinds of behavior problems which these patients exhibited as children are prognostic of their adult psychiatric status.

In order to examine more fully how particular kinds of behavior in childhood are related to adult psychiatric status, the immediate item of problem behavior which had

TABLE 4

RELATION OF PRESENTING COMPLAINT IN CHILDHOOD TO CURRENT PSYCHIATRIC STATUS

Current diagnosis	Theft	Destruction of property	Truancy	Incorrigibility	Running away	Fighting	Learning problems	Sexual misbehavior	Tantrums	Neurotic traits
Neurotic reaction	26%	0	12%	30%	20%	0	53%	53%	44%	38%
Psychotic reaction	10	17%	37	35	25	33%	7	7	14	21
Sociopathic personality	32	33	25	13	25	17	0	13	14	4
Alcoholism	6	0	0	0	5	0	0	0	0	4
Other	3	0	0	9	0	0	7	0	0	0
Undiagnosed	13	33	13	0	20	0	20	0	0	0
No psychiatric disease	10	17	13	13	5	50	13	27	28	25
Insufficient information	0	0	0	0	0	0	0	0	0	8
	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
	N=31	N=6	N=8	N=23	N=20	N=6	N=15	N=15	N=9	N=24

caused referral to the clinic as a child was related to his current psychiatric diagnosis. It was found that children referred because of theft or destruction of property contributed most to the number of adults diagnosed sociopathic personalities (Table 4). Those referred for truancy, incorrigibility, running away, and fighting were the ones most likely to show psychotic reactions as adults. Learning problems, sexual misbehavior, and tantrums were associated with neurosis in adult life. While some children in every category of the presenting behavior problems had no psychiatric disease as adults, those who were seen as runaways had the lowest rate of adult psychiatric health; those seen for fighting, the classic neurotic traits of childhood, tantrums, and sexual misbehavior had the highest rate of well adults. At the present time, too few interviews have been collected to provide sufficient cases of each kind of presenting complaint to permit confidence in these relationships, but it appears that certain kinds of childhood behavior problems are associated with particular psychiatric diseases in adult life. Further analysis of the childhood symptoms of these subjects will indicate whether patterns of symptoms may not be more specifically related to adult psychiatric status than is the immediate symptom which led to referral.

Relation of childhood home environment to adult psychiatric status.—Finding that adult psychiatric status was related to the groups to which patients were assigned on

the basis of their childhood behavior problems raises the question whether the differences found might be attributable to other factors related to childhood behavior problems than to the behavior problems *per se*. Analysis of the original clinic records had indicated that the home environment of these children was related to their behavior problems in two ways: 1. those with neurotic problems came from a better socio-economic background, as judged by occupation of the father or breadwinner (Table 5), and 2. children in Group II came more often from broken homes than children in Group I or III (Table 6). Was it possible that the relatively good outcome of the children in Group III did not indicate that neurotic problems are less serious in childhood than anti-social behavior or delinquency, but rather that these children do better because they come from more secure homes, financially and emotionally?

When the socio-economic level in childhood was related to adult psychiatric status

TABLE 5

CHILDHOOD SOCIO-ECONOMIC STATUS			
Occupation of breadwinner	Group I	Group II	Group III
Labor, unemployed, farmer	77%	68%	55%
White collar	23	32	45
	100%	100%	100%
	N=35	N=47	N=33

TABLE 6

PREVALENCE OF BROKEN HOMES BEFORE EIGHTEENTH BIRTHDAY

	Group I	Group II	Group III	Controls
Unbroken	46%	28%	58%	68%
Broken	46	66	42	32
By Parents'				
Death	17	43	30	32
Desertion, divorce ..	26	19	9	0
Illness	3	2	3	0
Incarceration	0	2	0	0
No information	8	6	0	0
	100%	100%	100%	100%
	N = 35	N = 47	N = 33	N = 35

within each group, however, it was found (Table 7) that the upper levels, those whose breadwinner in childhood had been at white-collar level or better, had no higher a proportion without psychiatric disease as adults than the lower socio-economic levels. In fact, in Group II, the lower socio-economic levels have more adults without psychiatric disease than the upper levels.

Similarly, when the rate of broken homes was related to adult psychiatric status within each group, it was found (Table 8) that sub-

jects from homes broken either by death or by separation and divorce were at least as often free of psychiatric disease as adults as those from unbroken homes. In fact, among both controls and patients, those from homes broken by death have fewer psychiatrically ill adults than those from unbroken homes. Patients from homes broken by separation and divorce do less well than those with homes broken by death, but not strikingly less well than those from unbroken homes.

These two measures, occupation of the

TABLE 7

RELATION OF SOCIO-ECONOMIC STATUS IN CHILDHOOD TO ADULT PSYCHIATRIC HEALTH

Current diagnosis	Occupation of breadwinner					
	Group I		Group II		Group III	
	White collar	Labor, farmer, unemployed	White collar	Labor, farmer, unemployed	White collar	Labor, farmer, unemployed
Well	12%	15%	7%	31%	33%	28%
Not well	88	85	93	69	67	61
Insufficient information	0	0	0	0	0	11
	100%	100%	100%	100%	100%	100%
	N = 8	N = 27	N = 15	N = 32	N = 15	N = 18

TABLE 8

RELATIONSHIP OF BROKEN HOMES TO ADULT HEALTH

Current diagnosis	Childhood Home					
	Patients			Controls		
	Broken by death	Broken by divorce or separation	Not broken	Broken by death	Broken by divorce or separation	Not broken
Well	30%	14%	18%	62%	100%	69%
Not well	67	83	80	38	0	27
Insufficient information	3	3	2	0	0	4
	100%	100%	100%	100%	100%	100%
	N = 30	N = 35	N = 50	N = 8	N = 1	N = 26

breadwinner and rate of broken homes, do not, of course, adequately evaluate the home environment from which these subjects came. Further analysis of their clinic records will permit a better evaluation. At this time, however, it seems probable that such factors in the home environment are related to the development of behavior problems in childhood, but once the disease is under way, they are not useful in predicting whether disturbed children will or will not be well in adult life. Children from the upper classes and from unbroken homes rarely develop psychiatric disturbance in childhood, but when they do, their chances of psychiatric health in adult life are no better than those who developed their childhood behavior problems in a less advantageous social setting.

Psychiatric treatment.—Although there is a high rate of diagnosable psychiatric disease among the former patients of the clinic, few of them had any further treatment after leaving the clinic.

Of the 35 patients in Group I, only 2 have had any outpatient contact, and these 2 saw a psychiatrist less than 5 times. One patient, a schizophrenic, has been in a public mental hospital for many years. There remain 25 (89% of those psychiatrically ill) who have never had any treatment.

The 47 patients in Group II have had slightly more psychiatric care, but still very little. Two patients have seen psychiatrists only for a diagnostic interview; another started outpatient treatment but has seen the psychiatrist less than 5 times. Four patients have actually had some psychotherapy as outpatients. One patient, diagnosed as psychotic depression, has been in a private mental hospital, and 5 have been patients in public psychiatric hospitals. There remain 24 (65% of those psychiatrically ill) in this group who are untreated.

Among the 33 patients in Group III, there has again been little psychiatric treatment. One person has seen a psychiatrist for diagnostic purposes, and 4 more have seen a psychiatrist less than 5 times. Two have been treated in public psychiatric institutions. There remain 13 (65% of those psychiatrically ill) in this group who are untreated.

In the control group of 35, only 2 persons

have sought psychiatric help, and they have each seen a psychiatrist less than 5 times. No control subject has been hospitalized for mental illness or received psychotherapy. In the control group there remain 11 (85% of those psychiatrically ill) untreated.

While former patients from Group II and Group III have had somewhat more psychiatric help than patients from Group I or controls, the striking finding is that few from any group have had psychiatric treatment. What psychiatric care is given appears to go primarily to those with psychotic reactions and, to a lesser extent, to those with neurotic reactions. Psychiatric diseases which imply largely social maladjustment, *i.e.*, alcoholism and sociopathic personality, are simply not treated.

DISCUSSION

The comparison of the rate of psychiatric disease in a group of ex-patients of a children's psychiatric clinic with that in a group of normal controls indicates that the problems for which children are seen are frequently the first symptoms of serious, lifelong psychiatric disease. The juvenile delinquent often matures into the sociopathic personality; the incorrigible runaway or truant may end as a schizophrenic. In the virtual absence of any attempts at therapy with these children, it is not possible to say whether the course of their disease could have been altered, but given the conditions under which they matured, a high proportion fail to "outgrow" their childhood problems.

While the prevalence of psychiatric disease is high in this group, psychiatric care of any kind is infrequent. Only the most grossly disturbed psychotic individuals have been treated with a high frequency. While sociopathic, psychotic, and alcoholic patients may not perceive themselves as sick, and therefore not seek medical aid, it is striking how few of the neurotic patients, many of whom have subjectively disturbing or disabling symptoms, seek any kind of help. They consider themselves "nervous," but feel they should learn to live with their symptoms. It will be interesting in further study to discover to what extent this failure to seek treatment is a function of the low social class of the patient group as a whole (12).

It is striking that the very group of patients most likely to reach adult life without psychiatric disease, those with neurotic behavior in childhood, are just the ones who are most likely to reach the private psychiatrist's office as children, while the group most likely to have adult psychiatric difficulties, the juvenile delinquents, are largely handled by the courts rather than the medical profession. It is our impression that the relatively good rate of success of this group with neurotic problems in childhood is partly a function of the differential access to psychiatric help of the various social classes. Many of the children from white-collar families were referred for behavior problems that appear innocuous as compared with the problems seen in children from lower class families. With a less virulent initial illness, it is not surprising that they should have a better prognosis. Children with similar problems at a lower socio-economic level would probably never have been referred to the clinic.

It is interesting that the control group, picked purely on the basis of having no striking difficulties at school, should present no cases of sociopathic personality or schizophrenia. While there are too few cases to conclude from this that these diseases do not occur in the absence of a history of school difficulties, it seems well worth investigating to what extent the grammar school record might be used in predicting adult psychiatric health. The simple criteria used to choose the control subjects—no excessive absences, no full grade repeated, no disciplinary action recorded, and an I.Q. of 80 or better—have yielded a strikingly healthy group. Other studies of the incidence of psychiatric disease in a normal population have reported figures as high as 81% ill (13). Our control group had only 40% ill. Our method of selection has, of course, eliminated feeble-mindedness and senility as possible diseases, but the disparity still seems great. The health of the control group is particularly striking in view of the fact that it is drawn largely from the disadvantaged classes and that a history of broken homes was found in one-third of the cases.

CONCLUSIONS

1. A preliminary report of the first 150 interviewed subjects in a long-term (30-year) follow-up study has been presented. This report emphasizes the adult psychiatric diagnoses and their relation to childhood problems.

2. Patients referred to a child guidance clinic 30 years ago were found to have a high rate of psychiatric disease as adults as compared with a matched group of normal controls. They differed little from the normal controls in their rate of neurotic reactions but presented many cases of sociopathic personalities, psychotic reactions, and alcoholism.

3. The patients who contributed primarily to the diagnosis of sociopathic personality were those who had been juvenile delinquents as children. Many of those who were psychotic as adults had a history of anti-social behavior in childhood without court hearings. Patients who were psychiatrically well as adults came mainly from the group with neurotic problems as children. The relations between the specific presenting problem and the adult psychiatric disease show that the well group was characterized by problems such as fighting, sex problems, tantrums, and the classic neurotic traits of childhood.

4. While children with neurotic problems came from families of better socio-economic background than children with anti-social problems and delinquency, class background was not found to account for the greater proportion of psychiatrically well as adults among the subjects who had had neurotic problems in childhood.

5. While patients had a higher rate of broken homes than controls, broken homes were not found to be related to the continuance of psychiatric problems into adult life.

6. Although the rate of psychiatric disease is very high in the patient group, very few of them have sought any psychiatric help.

BIBLIOGRAPHY

1. Morris, H. H., Escoll, P. J., and Wexler, R.: *Am. J. Psychiat.*, 112: 991, June, 1956.

2. Morris, D., Soroker, E., and Burruss, G.: *Am. J. Orthopsychiat.*, **24**: 743, Oct., 1954.
3. Robins, E., and O'Neal, P.: *The Nervous Child*, **10**: 246, 1953.
4. Bender, L.: *Psychiat. Quart.*, **27**: 663, 1953.
5. Glueck, S., and Glueck, E.: *Juvenile Delinquents Grown Up*. New York: Commonwealth Fund, 1940.
6. Powers, E., and Witmer, H.: *An Experiment in the Prevention of Delinquency*. New York: Columbia Press, 1951.
7. Thom, D., and Johnston, F.: *Mental Hygiene*, **25**: 269, April, 1941.
8. Bronner, A.: *Am. J. Orthopsychiat.*, **14**: 28, Jan., 1944.
9. *Diagnostic and Statistical Manual Mental Disorders*. Washington, D. C.: American Psychiatric Association, 1952.
10. Robins, L., and O'Neal, P.: To be presented at the annual meeting of the Am. Sociol. Soc., Washington, D. C., 1957.
11. Robins, L., and O'Neal, P.: To be presented at the annual meeting of The National Council on Family Relations, West Lafayette, Indiana, 1957.
12. Hollingshead, A., and Redlich, F.: *Am. Sociol. Rev.*, **18**: 163, Apr., 1953.
13. Rennie, T., Srole, L., Opler, M., and Langner, T.: *Am. J. Psychiat.*, **113**: 831, Mar., 1957.

COMMUNITY MENTAL HEALTH RESEARCH: FINDINGS AFTER THREE YEARS^{1, 2}

MARGARET C.-L. GILDEA, M.D.,³ HERBERT R. DOMKE, M.D., M.P.H., IVAN N. MENSCH, PH.D., A. D. BUCHMUELLER, M.S.W., JOHN C. GLIDEWELL, PH.D., AND MILDRED B. KANTOR, PH.D.

The research project to evaluate the mental health program of the St. Louis County Health Department has finished its third year. This paper summarizes the work to date and points out future directions. The basic problem was to evaluate three levels of mental health services set up as preventive and early treatment measures, operating in and through the schools. The three levels are defined as follows (1):

1. A dual program: the simultaneous operation of an educational program (2) consisting of discussion groups of parents in the school setting, led by lay people especially trained in leadership techniques; and also a school-centered mental health service (3, 4, 5, 6) supplied by professional workers.

2. The lay education program alone; and

3. A control, schools in which no organized mental health program is operating.

The problem of setting up a research design that would enable us to study the effects of the two programs together and separately, and at the same time eliminate extraneous influences by suitable controls was a difficult one, reported previously (1). After much consultation an incomplete blocks design (7) was set up, in which 15 schools were to participate. The population of third-grade children and mothers was to be studied before, during, and after the operation of one of the three levels of the program defined above. Thus three annual waves of data were to be collected, and we are now mid-way in collecting the third. No changes brought about by the program have yet been measured. This paper reports work through the pilot

study, and some of the findings in the analysis of the first year's data collection, especially in the area of maternal attitudes, on the total sample of third-grade mothers and children in the 15 experimental schools.

Having established the basic hypothesis that attitudes in parents are related to behavior disturbances in children, and that our mental health program can change these attitudes, and having selected the research design, we next studied the complicated subject of what data to collect, and how best to collect it.

Workable sub-hypotheses about program goals, the pertinent relationships between parents, children, school and community were formed. This was done by boiling down interviews and conferences with all the professionals involved, about what they were trying to do, and why. These workers were from different disciplines, psychiatry, psychology, and social work, and there was a wide variation in their general orientations toward the root causes of human behavior; but still there was considerable unanimity of opinion. All agreed on the basic assumption that attitudes held by mothers affect for better or worse the behavior of their children. Two of us who had worked together 10 years in community mental health activities felt that when mothers of children with behavior problems were able to accept the fact that they were involved among the causes of the children's problems, and thus could modify their behavior and improve the children's situation, the battle was over (3, 4). Rejection of the mother-role was another attitude one of us had seen frequently in clinical practice. These are mothers who hate to grow up, who feel that the children have all the fun and that adult life is pure drudgery. These mothers are competitive with their children, frequently for grandmother's attention (4). The problem was to identify, define and assess these and other attitudes, and then to upgrade them

¹ Read at the 113th annual meeting of The American Psychiatric Association, Chicago, Ill., May 13-17, 1957.

² This is a report on part of a Mental Health Research Program of the St. Louis County Health Department and Washington Univ., supported by research grant M-592 from the National Institute of Mental Health of the National Institutes of Health, United States Public Health Service.

³ 4500 West Pine Blvd., St. Louis 8, Mo.

by using the mental health operations before described. To do this one must capture the significant maternal attitudes, and also evaluate the emotional state of the child, before and after the operation of the program.

In order to place the child on a level representing his emotional adjustment a number of tools were devised to study him. These are:

1. An interview with the mother.
2. Adjustment ratings by the teacher, by the professional worker, and by both.
3. Group psychological testing of the children, including *Wishes*, an instrument designed by Rogers(8) and modified for the present study. This is a measure of reality contact. *Secret Stories*(9) was designed by one of us for assessing children's reactions to parents and peers. This is a story completion test, which is a limited projective technique.
4. Sociometrics, classroom and family.
5. Observation of children's interaction in the classroom during a special classroom activity, the bean game.
6. School records.

The techniques were applied and validated by a pilot study of 126 families of third-grade children in the spring of 1954. During the pilot study it was found that the teachers' opinions as to the emotional state of the children agreed within 86% with the opinion of the professional school mental health worker. The teacher thus proves to be a reliable screening tool. By these combined observations the children were assigned to groups representing their levels of adjustment. The levels used and validated were: 1a. unusually well adjusted, 1b. averagely or normally adjusted, 2. sub-clinically disturbed, 3. clinically disturbed, or requiring referral to the child guidance clinic. These criterion groups were derived from Ullman(10) and used in all subsequent analyses. Groups 1a and 1b were combined as "normals" in some of the analyses.

The interviews with the mothers were conducted by trained interviewers who reported(a) a summary of the interviewer's impression of variables influencing the interview situation (mother's attitude toward the survey, interruptions, unusual factors in the life situation of the mother, and character-

istics of the dwelling and neighborhood); (b) the family background and structure, e.g., occupation, income, education, religious and other group participation; (c) a symptom inventory of the child's behavior; (d) the mother's perception of her role in child care; (e) the mother's attitudes toward child care as indicated in her responses to the attitude scale; and (f) the amount and kind of the mother's contact with mental health resources in the community.

Findings from the pilot study were of several sorts. The symptom inventory(11) which was part of the interview and reported the mother's observations of her child's symptoms was found to be a reliable screening device, differentiating successfully the 4 criterion groups. The symptoms specifically asked about, with frequency, duration and severity noted, follow:

THE TWENTY AREAS OF DIFFICULTY SCREENED BY A SYMPTOM INVENTORY

- | | |
|---------------------------------|-------------------------|
| 1. Eating | 10. Sex |
| 2. Sleeping | 11. Daydreaming |
| 3. Digestion | 12. Temper tantrums |
| 4. Getting along with children | 13. Crying |
| 5. Getting along with grown-ups | 14. Lying |
| 6. Unusual fears | 15. Stealing |
| 7. Nervousness | 16. Destructiveness |
| 8. Thumb sucking | 17. Rejection of school |
| 9. Overactivity | *18. Wetting |
| | *19. Speech |
| | †20. Motion sickness |

Sample Inventory Question

"Does Johnny have any trouble getting along with other children?"

- A. "How often does he have this trouble?"
- B. "How long has he had this trouble?"
- C. "How serious is it?"

* Added after pilot study; included in all later work.
† Added for special study in third year only.

The classroom sociometric data also provided a screening device since the better adjusted children were chosen more frequently than the less well adjusted(9). The "Secret Stories" showing the child's relationship to parents and friends, also differentiated the criterion groups(9). The rank ordering of family and friends did not confirm work previously reported by Rogers(8) but it was found that there was a modal distribution of preferences in the child's concept of his family(12). Also the idea that the grandmother in the home is associated with dis-

turbance, as reported by us (4) previously, was not confirmed. However, grandmothers in the pilot study were a very small sample, 14 cases, and this hypothesis will be retested in the total sample.

The problem of assessing the relevant maternal attitudes is a very sticky one. It is essential first to be able to identify the significant attitudes of mothers which influence the behavior of their children. A valuable piece of work done earlier on this subject is by Edward J. Shoben, Jr. (13) at the University of Southern California. He constructed an attitude survey of the questionnaire type, containing originally 148 items bearing on the points of view of adults toward children. This instrument was administered to 100 mothers. Fifty were mothers of children who had been identified by the police as delinquent, or whose parents considered them as needing help for behavior or emotional problems. The other 50 was a control group of mothers, matched pretty well as to socio-economic level as measured by income and occupation of the husbands. The control group, however, averaged over 12th grade in school, and was significantly better educated than the problem group which averaged about 10½ grades. Both groups were better educated on the average than the parents in our sample.

When the original 148 items were administered to those 100 mothers it was found that 85 items discriminated between the mothers of problem children and the control group. Shoben submitted these 85 items next to 40 more mothers, again of 20 problem children and 20 controls. These were not matched, but selected only on the basis of problems (as previously defined) in their children. Although shrinkage occurred the amount was not excessive, and the items again clearly discriminated the mothers of problem children from the normal controls. The questionnaire was constructed on a 4-point scale and Dr. Shoben comments that *in some cases* the problem subjects favored extremes of response categories while the controls *consistently* chose the middle ones.

In our pilot study 80 items derived from Shoben's 85, but not identical with them, were submitted to 126 mothers. This sample was composed of 90 mothers of third-grade

children, and 36 mothers of children who were in the child guidance clinic. Slight changes were made in the wording of the items because the mothers in our sample were of a lower educational and socio-economic level than those in the Shoben study and we felt the meaning of some of the Shoben items would not be easy for them to understand. The children of these 126 mothers were sorted out into 3 levels or categories of disturbance. These 3 criterion groups were established as follows: for 62 mothers by the fact that their children had been under observation in the schoolroom for one year and showed no evidence of disturbance; 39 of the mothers had children who showed evidence of disturbance as determined by the school mental health workers in consultation with their teachers, but were not sufficiently disturbed to have been referred to the child guidance clinic, and 25 of the families had been referred to the child guidance clinic. The fact of clinical degree of disturbance in 23 of the 25 children was established by complete clinical study and diagnostic conference.

Thirteen of the 80 items in our pilot study showed on analysis a significant relationship to emotional disturbance in these children. Three of these items which discriminated the criterion groups related to whether or not the mother considered herself involved in the child's problem. Four were items indicating the mother's attitude toward discipline and conformity. The last group of discriminating items related to comfort and self confidence or discomfort in the mother-child roles: three related to how to handle sexual play or ideas, and one stated that it was difficult to know how to deal with a child's unrealistic fears. One was a school or social adjustment item. Last was an item of parental rejection.

After much discussion among ourselves and our University of Michigan consultants a group of 17 items was compiled which included the above 13, and three more of the Shoben items that looked promising. Also included was a "maturity" item mentioned before, derived by one of us from clinical practice, *i.e.*, "Children have more fun than grownups do." This 17-item attitude schedule was included in the questionnaires ad-

referred to the total sample of 823 third-grade mothers in the first year's data collection, from the schools composing the research design. The children in this study were assigned to criterion groups, as defined above, primarily by teachers' opinions, but also by consultation between the teachers and mental health workers. When the answers to these 17 items were analyzed in relation to the criterion groups (*i.e.*, the degree of emotional disturbance), no significant correlations were obtained. However when the items were analyzed in relation to social class, as derived from Warner's (14, 9) classification, a clear-cut relationship between answers and social class was obtained. Eight of the 17 items were found to be significant at the .05 level of probability or better in chi-square tests. A list of the 17 items and their chi-squares, as analyzed by social class, follows:

17-ITEMS—SOCIAL CLASS DIFFERENCES IN MATERNAL ATTITUDES

Attitude item	Chi-square	P	Discrimination of social class
1. Problems in children come out of troubles inside the family.	5.17	.70	not significant
2. Children have more fun than grown-ups do.....	60.98	.001	significant
3. It is hard to know when to make a rule and stick by it..	20.33	.01	significant
4. Jealousy is just a sign of selfishness in children.....	24.23	.001	significant
5. School is a hard place for children to get along in.....	11.89	.10	not significant
6. Parents who are strict with their children know ahead of time what their children will do and what they won't do..	8.64	.20	not significant
7. It is hard to know what healthy sex ideas are.....	35.89	.001	significant
8. When neighbors or teachers complain about the behavior of a child, this shows that the parents haven't done a good job	1.59	.98	not significant
9. It is hard to know what to do when a child is afraid of something that won't hurt him.....	6.48	.50	not significant
10. It is hard to know what healthy sex play is.....	13.92	.05	significant
11. Children don't try to understand their parents.....	3.88	.70	not significant
12. No matter what parents try to do, there are children who don't change at all in the way they behave.....	29.83	.001	significant
13. The most important thing children should learn is obedience to their parents	46.98	.001	significant
14. It is hard to know when to let boys and girls play together where they can't be seen.....	22.77	.001	significant
15. When they can't have their own way, children try to get around the parents some other way.....	6.07	.50	not significant
16. It is hard to know when I am forcing my child to be too different from other children.....	7.45	.30	not significant
17. Children should not bother their parents with petty problems	12.49	.10	not significant

Thus it appears that the attitudes of mothers as reflected in these 8 significant items correlates with the social class of the families, and not with the degree of disturbance in the child. Our failure to confirm Shoben's work may have resulted in part from the class and educational levels of

our samples, which were definitely lower than that of either his problem or control group. However, we do find, confirming Shoben, that the mother who held the most extreme opinions in the direction of the commonly held opinion of the class to which she belongs is more likely to have a disturbed child.

About three times as many boys as girls are referred to the mental health worker. This coincides with many other observations. We assume that one reason for this is that because the teachers are middle class women they understand middle class children better, and girls better than boys. Beyond the usually mentioned reasons why boys are more frequently referred for help than girls it occurs to us that the female teachers may tolerate deviations from the norm in girls better than in boys.

In all cases where the items were signifi-

cant the higher the social class of the mother the more likely she was to disagree with the statement. We see the distribution of parental attitudes generally along straight lines. The upper class mothers accept responsibility for child behavior, believe that grown-ups have more fun than children, and that

standards of discipline and behavior are comparatively easy to establish. All 3 sex items were significant, with the upper class women feeling that the sexual problems of their children are relatively easy to understand and deal with. As we go down the social ladder we see the mothers increasing in turmoil and uncertainty about discipline and sex, and we see them feeling that the children have all the fun.

Our failure to confirm our own earlier work (3, 4, 5) in which we believed that the mother's acceptance of responsibility for her child's behavior correlated with good or improved adjustment appears to have resulted from the difficulty of separating social class factors from attitudinal factors. For instance, we now have studies on several samples showing that, with our screening methods, we find proportionately more disturbed children in the lower and upper classes than in middle classes. Prior to this study our research had not included the upper classes, and we found more disturbance in the lower classes than in the middle. At the same time we also found proportionately more disturbance in children whose mothers denied responsibility for the behavior of their children. We can now say that acceptance of responsibility correlates with social class, like the other significant attitudes, on a straight line. Greatest acceptance is found in the upper classes, next greatest in the middle classes, and least in the lower classes. Reviewing our previous work in light of this finding we find that the lower class groups are characterized by both

a high incidence of disturbance and a denial of maternal responsibility for child behavior. The large sample in our current work permits us to examine the relationship of social class and this attitude when disturbance is held constant, and our social class findings are confirmed. We may also examine the relationship between attitude and disturbance when social class is held constant. In this case our previous findings are not confirmed, and it appears that a mother's acceptance of responsibility for the behavior of her children is more related to social class than to disturbance.

In order to investigate further the relation of maternal attitudes to children's behavior, we included a group of open-ended questions in the questionnaire administered to the total sample of 823 mothers. The questions asked the mothers what pleases them or displeases them about their children and the parent role. In relation to the symptom check list mentioned above the mother is asked what she thinks caused each of the symptoms (up to the first three mentioned), how she thinks it will come out, and what she plans to do, or thinks she can do, to improve matters. The answers to these questions have been coded and punched on cards after much discussion. The points of coding are whether the mother believes that the child's behavior is caused, or has no discernible cause, whether the cause is single or multiple, whether the mother is involved in any way, and whether she believes she is able to influence or change the symptomatic behavior. A chart illustrating this method of conceptualization and coding follows:

CHART FOR CODING ATTITUDES OF MOTHERS TOWARD THEIR CHILDREN'S SYMPTOMS

		Cause of symptom				
		Natural		Supernatural		No cause (it just happens)
		Multiple	Single	Multiple	Single	
Mother feels involved and/or responsible	She feels able to change things	A	—	—	—	B
	She feels unable to change things	—	—	—	—	
Mother does not feel involved and/or responsible	She feels able to change things	—	—	—	—	C
	She feels unable to change things	—	—	—	—	

The mother whose reported attitudes place her in box A believes that her child's behavior has many natural causes, and that she is involved and able to change things for the better. Our hypothesis is that this mother will have the best adjusted child. Conversely the mother in box B, who sees no cause for her child's behavior, or box C, who believes the behavior has no natural cause, and that she is not involved, and thus cannot help it, will have the most disturbed children.

DISCUSSION

The many problems in doing research in mental health evaluation have to be met individually, and with special reference to the individual characteristics of the community and its people. Early in the school mental health work done by two of us it became apparent that certain populations could use the school mental health service readily, and that various degrees of difficulty were encountered in various areas in gaining acceptance. We now see that the schools in which we met with such marked success serve populations of the lower middle, and upper lower classes. We experienced hopeless difficulty, and ultimate failure, after 2 years of effort in schools serving a deprived minority group, negro (15). The work reported here shows clearly that normal parental attitudes vary with social class, and thus implies the need to tailor the mental health service even more explicitly to the population to be served than we had heretofore thought necessary.

At the opposite end of the scale in our lay education program we had found that great difficulty was experienced by discussion leaders who went out with mental health films to the private schools serving the upper-middle and upper classes. The lay leaders who went out readily to most assignments dreaded going to private schools. We found when we could send a leader who herself came from a class well up the scale to a private school, we had a much better chance of success; but even then, less than in the middle class public schools.

Our work has shown that quite adequate screening tools are available to select the school children who would be helped by special consideration in program planning and in treatment. These are inexpensive methods, either because the material is at hand, as in the case of teacher's opinions about children's adjustment, and school achievement records, or the methods can be applied in groups as in the case of the group testing, the sociometrics, and the symptom inventory.

We are at present well along in the third year of data collection, and will finish next year, but data treatment lags far behind col-

lection. Our next task is to analyze further the open-ended attitude items, and to continue exploring significant attitude findings within each social class.

SUMMARY

Three years of work in a research project to evaluate a community mental health program have been reviewed. Problems in hypothesis formation, research design and instrument validation have been discussed. Positive correlations have been found between the degree of emotional disturbance in school children and teacher's reportings, school achievement, a group test, sociometric data and mother's symptom reporting. Positive correlations have been found between attitudes of mothers toward children and the social class of the family. We find a greater number of referrals of disturbed children in the upper class and extreme lower class, fewer in the middle and upper lower classes. Boys are referred more frequently than girls. More boys are in the clinically disturbed criterion group, and more girls in the normal groups. We also report an hypothesis about the relationship between maternal attitudes and children's symptoms as shown by open-ended questions, and a concept for coding and analyzing the responses.

BIBLIOGRAPHY

1. Glidewell, J. C., Mensh, I. N., Domke, H. R., Gildea, M. C.-L., and Buchmueller, A. D.: *Am. J. Orthopsychiat.*, 27:1, Jan. 1957.
2. Brashear, E. N., Kenney, E., Buchmueller, A. D., and Gildea, M. C.-L.: *Am. J. Orthopsychiat.*, 24:3, July 1954.
3. Buchmueller, A. D., and Gildea, M. C.-L.: *Am. J. Psychiatry*, 106:1, July 1949.
4. Buchmueller, A. D., Porter, Frances, and Gildea, M. C.-L.: *The Nervous Child*, 1:3-4, 1954.
5. Buchmueller, A. D., and Gildea, M. C.-L.: *Internat. J. Soc. Psychiat.*, 1:3, Winter 1956.
6. Buchmueller, A. D., and Domke, H. R.: *Children*, 3: 1956, p. 225.
7. Cochran, W. G., and Cox, G. M.: *Experimental Designs*. New York: John Wiley & Sons, 1950.
8. Rogers, C. R.: *Measuring Personality Adjustment in Children Nine to Thirteen Years of Age*. New York: Bur. Publ., Teachers Coll., Columbia Univer., 1931, Contrib. Educ. No. 458.
9. Domke, H. R.: *An Evaluation of a Preventive Community Mental Health Program: Progress Report #3*. St. Louis Co. Health Dept., Clayton, Mo. Dec. 31, 1956.

10. Ullmann, C. A.: Identification of Maladjusted School Children. Public Health Monograph #7, 1952.
11. Glidewell, J. C., Mensh, I. N., and Gildea, M. C.-L.: *Am. J. Psychiat.*, 114: 1, 1957.
12. Mensh, I. N., and Glidewell, J. C.: Children's Perceptions and Relationships Among Their Family and Friends. *J. Exper. Educ.* (in press).
13. Shoben, E. J., Jr.: *Genetic Psychology Monographs*, 39: 101, 1949.
14. Warner, W. L.: *Social Class in America*. Chicago: Science Research Assoc., Inc., 1949.
15. Kahn, J., Buchmueller, A. D., and Gildea, M. C.-L.: *Am. J. Psychiat.*, 108: 5, Nov. 1951.

DISCUSSION

ROBERT W. LAIDLAW, M. D. (New York, N. Y.).
—In attempting to evaluate the data presented by Dr. Gildea and her associates, it is important to remember that this is essentially an interim or progress report. An earlier publication describes in more detail the setting up of the research design and, in the future, the authors promise a further report in which factors still under study will be discussed and analyzed.

This research in community mental health has a very realistic and practical objective, namely, to evaluate the effectiveness of the two least expensive types of service for school children—the school centered service and the educational program for parents. In this approach it attempts to discover and treat behavior disorders in children at a more incipient level and thus, in part at least, avoid later referral to a more expensive type of psychiatric resource, namely, the child guidance clinic.

The basic hypothesis of this study is one on which, I believe, all schools of psychiatry would agree—that attitudes held by the mothers affect, for better or for worse, the behavior of their chil-

dren. The problem here is to bring to the mothers of children with behavior disorders, through what is primarily a group therapy approach, a realization and an acceptance of the fact that they are involved among the causes of their children's difficulties. On such a realization is predicated a modification of their maternal attitudes and a consequent bettering of their children's behavior.

The problem from a research point of view is how to discover the best instruments to *measure* the effectiveness of a frontal approach to maternal attitudes. The study indicates clearly the difficulties encountered in gathering together a list of significant maternal attitudes. It was only after trial applications of 17 items on Shoben's earlier work that relatively few items of significant importance were retained.

In this study the mothers' answers to these 17 items showed no significant correlation with the degree of emotional disturbance in the children. Since many of the children fell into an underprivileged category, it may be that the scales were tipped in an adverse direction by unwholesome influences outside the home, even though their mothers may have had positive and responsible attitudes toward them.

The conclusion which Dr. Gildea and her co-workers draw on the basis of their finding that normal parental attitudes vary with social class is an important one, namely, that it is most necessary to adapt the mental health service to the type of population to be served even more closely than had heretofore been thought necessary.

It is to be anticipated that when Dr. Gildea and associates have completed this project they will have delineated a practical, inexpensive type of mental health program for the schools together with sharpened and validated instruments for measuring its effectiveness. This should have wide applicability and prove to be a valuable contribution to preventive psychiatry.

PATTERNS OF PATIENT MOVEMENT IN GENERAL HOSPITAL PSYCHIATRIC WARDS¹

LUCY D. OZARIN, M.D.²

This paper proposes to review pertinent literature concerning the use of hospital space for psychiatric patients, to report on the observations of patient movement in 7 psychiatric wards in 5 general hospitals and to derive some conclusions applying to physical facilities for psychiatric patients in general hospitals.³

Review of Pertinent Literature.—Space is a dimension surrounding all things. All animate beings inhabit and make use of space either by instinctive patterns or by learned or planned behavior. Space is an important aspect of the economy and pattern of life.

Hediger, Director of the zoo in Zurich⁴ (1), has described the behavior of animals both in their natural habitat and in zoos. From his observations, he draws many parallels in the space habits and needs of man and other animals, birds and reptiles.

Hediger points out that space has not only the characteristics of quantity, but also characteristics of quality. Animals demark the extent of the space they take for their own, often by leaving their scents on the borders. Some animals and birds may die if their living space becomes insufficient. Naturally the most important part of an animal's territory is its nest or home. Hediger cites numerous examples to illustrate that behavior of mammals, birds and reptiles is often determined by the quality and quantity of space in which they live, their environment.

¹ Read at the 113th annual meeting of The American Psychiatric Association, Chicago, Ill., May 13-17, 1957.

² From the Architectural Study Project of The American Psychiatric Association. This Project is supported by grants from the Division of Hospital and Medical Facilities, U. S. Public Health Service and the National Institute of Mental Health. Address: 4607 Jefferson St., Kansas City, Mo.

³ The conclusions and suggestions in this paper reflect the personal views of the author and do not represent official statements of The American Psychiatric Association.

⁴ I am indebted to Dr. Humphrey Q. Mendel of Saskatchewan for telling me of Hediger's fascinating book on the *Behavior of Animals in Zoos and Circuses*.

Man, also, demarks his space by fences or numbers. "A man's home is his castle," and since ancient times the law has permitted a man to defend his home against invaders.

Mr. Robert Pace(2), an anthropologist at the Veterans Administration Hospital, Downey, Illinois, describes an illustrative incident occurring in a mental hospital. He entered a dayroom in a chronic psychiatric ward to observe the patients, choosing a chair in a corner of the room. Shortly after he noticed a patient pacing back and forth near him. Later when all the patients went to lunch, Mr. Pace walked out with them and in the corridor was struck by the restless patient. Seeking an explanation, Mr. Pace learned from an aide that the chair he had taken was the one the angry patient usually occupied.

Dr. Edward Stainbrook(3) has described how the structure of a building determines the behavior of the people and their task performance or living interaction within the building. He cites as examples the one room Eskimo igloo and the Moslem upper class dwelling. In the latter case, the structure is one to limit communication or exchange between the women's quarters and the rest of the house. Stainbrook quotes Robert Merton's phrase, the "self fulfilling prophecy" as applicable to mental hospital architecture.

... if the very physical space of the hospital anticipates disturbed behavior in the people who are going to inhabit it, it will inevitably tend to produce stereotypic expectancies that this kind of behavior is going to happen, both on the part of the patient, who has to learn how to be a patient in this environment, and on the part of the personnel, who also have expectancies about how patients are going to behave in a disturbed ward ... it is the physical space which determines a good deal of the possibilities of interaction in the life space.

While participant interaction is important in a psychiatric setting, Stainbrook states that there is a necessity for everyone and particularly for the person disturbed in his living, to have considerable opportunity for privacy or self-communication. How to pro-

vide privacy is both an administrative and an architectural problem.

Recently Dr. D. Ewen Cameron (4) wrote:

Settings we now realize are an integral part of the actions that take place within them. They are fields of social force into which we put our various agents. . . . Agents and field force are not separable, each modifies the effectiveness of the whole; both together determine the result.

Social force implies communication, for without communication social force cannot exist. The role of social forces and communication in the mental hospital have been eloquently described by Stanton and Schwartz (5).

These are not new concepts although we may use modern terms for their expression today. Almost a hundred years ago, Thomas Kirkbride (6) considered the details of the physical structure of the mental hospital. He reminded his readers that the size of a mental hospital was set at 250 beds by the American Association of Hospital Superintendents so that the superintendent could visit all areas daily or every other day. This is recognition of the importance of communication. Kirkbride recommended that a ward be limited to an average of 15 patients. He advocated single rooms for patients and none so large that two beds could be squeezed in. If dormitories were used, they should be for 4 or 6 beds. Kirkbride wrote:

The great majority of patients would strenuously object to such an arrangement as the associated dormitory just as much in a hospital as they would in a hotel or boarding house and most of them regard with especial feeling the privilege of enjoying at times the privacy and quiet of their own rooms and this feeling should, if possible, be gratified.

Dr. Humphry Osmond of Saskatchewan (7) has sought to formulate the basic principles for psychiatric ward design by making use of present knowledge and theories of psychopathology. Since the schizophrenic often suffers from perceptual distortions, it is desirable that the space should not be too large and it should not be ambiguous in design. Mirrors help a confused patient to keep his identity more clearly in mind. The memory difficulties of old people may be lessened by painting different areas in different colors. Patients should be permitted to retreat into physical privacy when they feel threatened

rather than be forced into psychological withdrawal from reality.

Osmond (8) is particularly interested in the size of groups, arriving at the conclusion that "groups of 4 to 8 people are especially liable to form beneficial, supportive and constructive relationships." He, therefore, seeks to design his ward around sub-units of this size.

Mention must also be made of the book *From Custodial to Therapeutic Care in Mental Hospitals* (9) which describes in great detail the effects of physical surroundings on patients and staff.

The need for patient and staff space adequate in quality and quantity is expressed by many writers. Moll (10) in a recent article emphasizes this need and says, "Give the patient space, I repeat, give the patient space."

This brief review of the literature furnishes a background for the study described here.

The Use of Ward Space by Psychiatric Patients.—Our observational study of 7 psychiatric wards in 5 general hospitals was undertaken to seek clues as to the important variables in programming and planning physical facilities. The hospitals selected with one exception had participated in an earlier case record study carried out by the Architectural Study Project. The 5 hospitals had active treatment programs and a high patient turnover rate on the psychiatric service.

Space on a psychiatric ward may be divided into patient areas (dayroom, bedroom, corridor, toilet, hydrotherapy room, bathing and dressing areas, clothing room, occupational or recreational therapy areas) and staff areas (nurses' office, kitchen, treatment room, utility room, supply, storage and linen closets, doctor's office, etc.).

During one part of our study we recorded the movement of patients about the ward and the nature of their activities. Movements were recorded during 16 hours, divided into two 8-hour periods, within 2 or 3 days' time. Starting before the patients arose in the morning and continuing until they were all in bed at night, we checked every 15 minutes where each patient was and what he was doing. Patients were rarely found in staff

areas except at Hospital G-3, an open service where all doors were unlocked.

Patient activities followed a similar pattern at all 5 hospitals, with variations in extent and degree depending on treatment programs and administrative practices. They arose between 7:00 and 8:00, breakfasted, dressed, made beds, saw their psychiatrists, had shock therapy, went to occupational therapy either on or off the ward, or sat about the dayroom or bedrooms. After lunch there was a rest hour, or occupational or recreational therapy, visiting hours, or a period of sitting around the ward idly or in varying activities with other patients or ward personnel. After the evening meal, there might be either organized recreation, visiting hours or a period of sitting around again until bed time between 9:00 and 10:00 p.m. Depending on the individual hospital's practice, bathing was carried out in the morning or night.

Security needs.—Each patient's psychiatrist was asked to judge the nature and extent of the security required for that patient. In the judgements of their doctors, more than 80 of the 160 patients we observed required no security precautions. However, 50 of these 80 were housed on locked wards since no other type of psychiatric facility was available.

Dayrooms.—We found that the dayrooms at any time were not often more than half full except when they were also used for dining purposes. The largest number of patients tended to occupy the dayroom immediately after the evening meal. This is not unlike the usual evening scene in any home. It suggests that the evening is a good time for social interaction and that this

should be considered in planning the patient's day.

Our findings suggest that the total day area space should not be lumped into one large room as has been the usual arrangement in the past to facilitate the supervision of patients. We could find no evidence that such planning is to the patient's advantage. We found that patients preferred to be alone or in small groups. Those wards which provided several day areas made semi-privacy and small group gatherings possible and permitted a greater diversification of activities. If one room is needed for assembling all the patients, the dining area is a logical place since, unless it is so small that patients must eat in two shifts, this space will accommodate all the patients.

Dining Rooms.—On the 3 wards we studied which had dining areas, the area was open to the ward and patients used these dining areas a great deal outside of meal times for writing letters, playing cards or just visiting with each other. It seems that the physical proximity that comes from sitting around a small table favors social interaction.

Hospital G-3, the open ward, allowed patients in the kitchen where a coffee pot was always on the stove. The kitchen was an active social center for small groups of patients and staff were frequently included. The other 4 hospitals did not permit patients in the kitchens. At one hospital an evening popcorn party was held and the nurse secluded herself in the kitchen for 45 minutes preparing for the party while the patients watched television or played cards.

The wards which had dining areas offered many advantages. It was possible to set

TABLE 1

SIZES OF HOSPITALS AND PSYCHIATRIC WARDS, PATIENT OCCUPANCY AND DIAGNOSES

Hospital	Medical school affiliation	Total beds	No. of psychiatric wards	Psychiatric beds	Patient occupancy of ward	Diagnoses *				
						N	D	S	Or	Ot †
G-1.....	Yes	410	1	26	25	1	15	8	4	2
G-2.....	Yes	736	2 { P-33 M-24	57	{ 32 25	1	15	7	7	4
G-3.....	No	160	1	20	17	3	6	2	1	5
G-4.....	No	394	1	22	25	0	18	4	1	1
G-7	Yes	483	2 { A-18 ‡ B-17	35	{ 13 § 9	1	6	1	6	1
						4	3	5	1	0

* Patient turnover with new admissions may make total for a ward greater than occupancy.

† N—Neuroses; D—Depression; S—Schizophrenia; Or—Organic; Ot—Other.

‡ Men and women on separate wards.

§ Admissions limited during period of resident turnover.

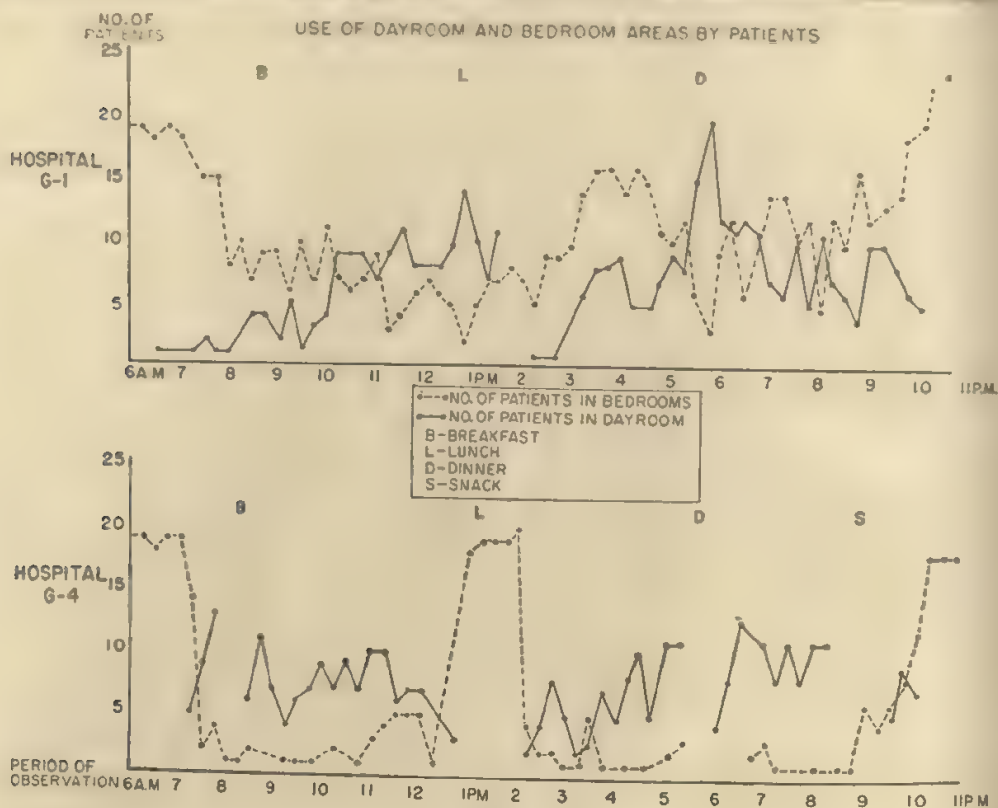


FIG. 2

tables in advance; every patient could sit at a table instead of balancing a tray on his lap or eating in solitude in his bedroom; patients could eat in small, comfortable groups that favored conversation. At the end of the meal, they could chat over their coffee and then leave the postprandial mess in the dining area.

Bedrooms.—All the wards we studied had single and double rooms. One ward had 3-bed rooms (originally built for 2 beds) and some wards had 4 beds. There were no larger dormitories. In all wards, the bedrooms were always kept open and the patients had access to them.

The bedroom types ranged from bare institutional atmosphere at G-2M to hotel-type rooms at G-2P and G-3 with closets, private toilets, soft lights and comfortable furniture. As a subjective observation, it seemed to the writer that staff attitudes and deference toward patients, the socioeconomic status of the patients and the luxury features of the wards were inter-related. At G-2M, the barest of

the wards we studied, the atmosphere was also the most rigid and typically institutional. This suggests the self-fulfilling prophecy mentioned by Stainbrook.

A few patients were in the bedrooms at all times although usually they were not the same individuals. The bedroom was the only place where the patient could have any privacy. Often, patients who shared double rooms tended to form a social relationship going to activities and meals together or visiting in their bedroom. We saw several instances also where a patient was quite distressed and disturbed by a roommate. The criteria for placing patients in single rooms were more clear cut than for other sized bedrooms. The patients assigned single rooms were those with physical illness who needed considerable nursing care; the noisy, combative, or untidy patients; those who snored loudly at night; and those for whom privacy was prescribed as a therapeutic measure.

Whether a patient was housed in a 2, 3 or

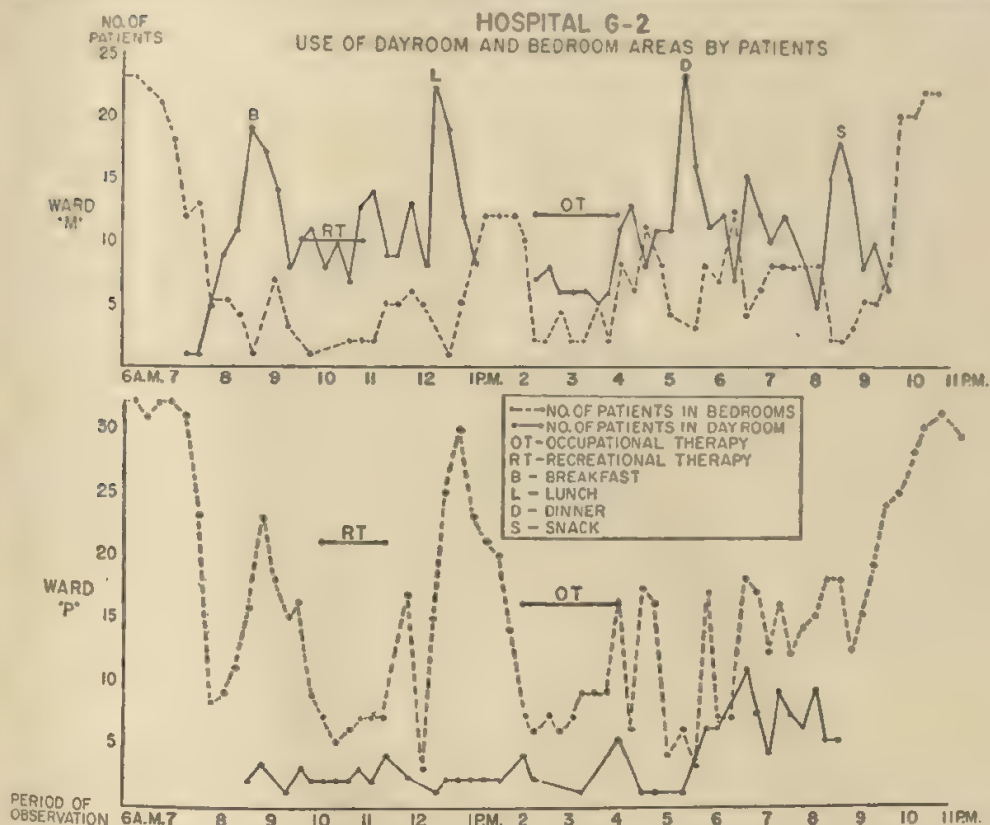


FIG. 3

4-bed room depended more on the availability of beds and the patient's finances. Some financially comfortable patients demanded single rooms. When the psychiatrists were asked directly what type of bedroom the patient required, the answer usually either reflected the doctor's preference for sleeping arrangements or he stated that it made no particular difference unless there was a special requirement as mentioned above.

Bathrooms, Toilets and Clothing Areas.—The more luxurious wards had some rooms with completely private baths. At Hospital G-2M there was one combined bath-toilet-locker room for each sex. The toilet stalls had no doors; bathtubs had no privacy. At G-4 the showers and toilets were in the same room but there were doors on the toilet stalls. At G-3, G-2P and G-1 toilet functions and bathing were carried out in individual rooms which gave privacy to the user. In the women's toilets and bathrooms, the writer

gained the impression that middle aged and older women were very embarrassed and uncomfortable by being nude in front of others.

At G-1 patients were in night clothes in conformity with the practice throughout the hospital. They rarely left the ward. At the other hospitals, patients wore street clothes. Except at G-1 and G-2M, patients had ready access to their clothes. In all the hospitals they shaved themselves except for the infirm patients. Shaving was always supervised and razors were kept in a staff room. When patients had access to their clothes and toilet articles their appearance and grooming was better than when they had to ask personnel to get their things from locked areas.

Patients' Laundry Room.—Hospital G-4 had a small laundry room equipped with a laundry tub and a wooden clothes drying rack. The laundry was used extensively by both men and women to wash their hose or underwear and occasionally outer clothing. The women also found the tub with the pro-

jecting water spout useful for hair washing. At G-4, doing the laundry assumed a social aspect. At times the women patients ironed clothes for the men patients.

At the other hospitals, personal laundry was done in the bathrooms and hung to dry in various places as treatment rooms, hydrotherapy rooms, etc. Wherever there are ambulatory patients, facilities must be provided for personal laundry. For a woman, a laundry is as essential to grooming as a mirror.

Hydrotherapy Rooms.—Five of the 7 wards had a continuous flow tub. Of the 160 patients surveyed, only one, a neurotic, was treated in such a tub and this was for only an hour a day. Hydrotherapy at present does not appear to be a frequent treatment in general hospital psychiatric wards. We found the hydrotherapy rooms being used for storage or for hanging patients' personal laundry, and since they contained no shelves or cupboards, they tended to be cluttered.

Shock Therapy Rooms.—None of the 7 wards we observed had facilities designed specifically for shock therapy. Subcoma insulin was used at G-3 on 4 patients and at G-7 on one. It was administered in the patient's bedroom—either a single or double room.

ECT was used frequently with the exception of Hospital G-7 and often in makeshift space. For example, at Hospital G-1, the treatment was given in a windowless, hot cubbyhole. After the convulsive seizure, the patient was moved for recovery across the corridor to a hydrotherapy room crowded with beds, tubs, and various types of treatment equipment.

Hospital G-3 used a large room designed as a day area at the seclusion end of the ward. This room had 3 cubicles screened from each other and required no movement of the patient. This permitted ease of administration and supervision. Additional beds were brought into the area if needed.

From our observations, the practice of administering treatment in the same bed and ward area used for recovery minimized movement of the patient and required less personnel. This method seemed very efficient.

Visitors' Rooms.—None of the 7 wards

we studied had visitors' rooms. Visitors were frequent and were received by the patients in the day areas or their bedrooms, except for Hospital G-4 which permitted no visitors. Often patients and their visitors would move from one area to the other. Sharing of visitors with other patients in dayrooms was common and seemed welcomed by both patients and visitors. Visiting hours produced a distinctly social atmosphere on the ward, especially during evening hours. No patient was observed who could not receive his visitors publicly. Two who had been in seclusion at times quieted considerably when they were with their visitors.

Need for separate visitors' rooms on a psychiatric ward was not supported by this study. In fact, visitors, like volunteer workers, added to the social atmosphere of a ward. It is likely that public acceptance of psychiatry will increase by permitting to relatives and friends first hand access with psychiatric patients and psychiatric settings.

Corridors.—One writer (7) suggests that corridors may be disturbing to patients with perceptual or memory disturbances. However, in our judgement, corridors provided valuable space for patient movement. At almost all times it was possible to see patients in the corridors either going from one room to another or just pacing the floors. The corridor was the largest continuous area on the ward in which one could move. The corridors were also a place of interest; patients could observe what was going on in the ward. A third function the corridors served was to permit more frequent patient-personnel interaction. Unless they entered patient areas, the patients had no contact with personnel unless they intercepted the staff in the hallways.

Occupational Therapy Clinic.—At Hospital G-2M, a group of patients not allowed to leave the ward had a 2-hour occupational therapy period daily in the dayroom and at Hospital G-1 a daily 2-hour occupational therapy session was held in a conference room.

In Hospital G-4 a large, well-equipped occupational therapy clinic was located on the ward and was open continuously to patients from 9:00 a.m. to 8:00 p.m., although the cupboards were locked and tools put away

when the therapist was off duty. Patients could enter or leave at will to carry out such handcrafts as painting, weaving, sewing and clay modelling. At the other hospitals, patients left the ward to go to an occupational therapy clinic elsewhere in the building. The availability of an occupational therapy clinic gave them additional space for interchange and activity. Space specifically planned and equipped for this purpose allowed a wide range of activities. The ward clinic as exemplified at G-4 seemed to offer certain advantages by its easy availability.

Recreation Areas.—Recreation areas in and around a general hospital are limited as a rule. For psychiatric patients, most of whom are ambulatory on admission and whose stay is usually at least several weeks, this poses some problems. However, except for G-1, the other 4 hospitals had arrangements to provide off-ward activities.

Hospital G-2 had a recreation staff and the use of a large gymnasium and game area as well as walking areas about the hospital grounds. Patients were encouraged to take advantage of the organized recreation program and for 3 to 4 hours a day more than half of them were off the wards. Hospital G-4 arranged daily rides and outings to public places of interest for small groups. These excursions lasted from one to two hours and were under the supervision of the occupational therapist and nursing staff.

Recreation areas for psychiatric patients seem essential. To keep physically able people indoors and confined to a small area is not healthy for anyone, to say nothing of people who are tense and anxious and for whom movement is a method of dispelling tension.

Seclusion Rooms.—Each service had at least two seclusion rooms. The rooms were used very little except at Hospital G-4, where the seclusion rooms were on a secondary corridor entirely separated from the rest of the ward. Table 4 indicates the kinds of patients for whom use was made of these rooms. No restraint was seen during our observations. Atracetic drugs were prompt and effective in quieting acute excitement or disturbed states.

Critically Ill Patients on Psychiatric

TABLE 4

Hospital	Patient	Reason for seclusion
G-1	Female	Barbiturate coma
	Male	Hepatic coma
G-2 { "P" ..	Female	Manic excitement
	Female	Senile agitation noisy
	Female	Character disorder noisy, acting out
G-3	Female	Senile agitation
	Female	Schiz excitement
G-4	Female	Schiz catatonia
	Female	Senile
	Female	Depression electroshock confusion
G-7	Male	Depression
	Male	Uremia, toxic delirium
	Male	Impending delirium tremens

Wards.—There was a critically ill patient on each of 2 psychiatric wards studied. One was a moribund patient in hepatic coma; the other had a toxic delirium due to uremia. Both had been transferred from medical services. Both patients required a great deal of physical nursing care and medical attention. At Hospital G-1 the only night nurse on the ward was seen in the sick patient's room almost continuously from 6:00 a.m. until she went off duty at 8:00 a.m. Until this patient was returned to a medical ward, there was a tremendous amount of staff time devoted to his care on the psychiatric ward, and of course this left less time available for the other 24 patients on the ward.

Whether in a given hospital a physically ill patient with a psychiatric disturbance should be cared for on a medical or psychiatric ward may depend on the facilities and resources available. If the patient remains on the medical service, he may require placement in a special security type room or he may require the constant attendance of an aide or nurse. If he is on a psychiatric ward, it is necessary to provide staff and equipment to care for the additional load.

Children on Adult Psychiatric Services.—There was an immature 13-year-old boy on the psychiatric ward at Hospital G-1. At G-7A there was a 10-year-old, mentally defective, undersized child with severe speech difficulties. In both cases, the children required and demanded considerable staff time. If some one, either staff, parent or other patient were with them, they seemed content. Otherwise they were annoying to the other

patients. The 13-year old raced through the halls, played a bean bag game with great noise, and turned the radio up full force. On the evening we observed the ward, an aide was assigned to occupy him for 2 consecutive hours. The 10-year old seemed to want physical contact, to be close to others. He got in the nurses' way, he followed them around and sometimes inadvertently tripped them. Ambulant patients avoided him, but a wheelchair patient could not do so, and was often annoyed by the boy's rocking against his chair.

It seems clear that while an occasional admission of a child patient may not establish the need for a separate children's psychiatric ward, the staff should be prepared to give a child considerable time and attention, and plan a special activities program for him.

SUMMARY

The amount and organization of space on a psychiatric ward is one element determining the possibilities of the treatment program. Systematic observations by the Architectural Study Project of the movement of patients in 7 psychiatric wards of 5 general hospitals are reported. These observations lead the writer to the following opinions.

More patients are kept on locked wards than need be locked up. Typically, there is need for more bed space on unlocked wards, less space on locked wards.

Ward arrangement which provides several small day areas is to be preferred to one large dayroom.

Ward dining rooms offer many advantages.

Bare wards seem to imply that patients have little value and foster an institutional atmosphere. More comfortable furnishings foster a ward atmosphere of more respect for the patient.

Since the use of hydrotherapy equipment is minimal at present, minimal facilities for hydrotherapy are adequate.

There is need for planning suitable space for the administration of shock treatments.

Special visitors' rooms do not seem necessary or desirable if suitable day areas are provided.

Recreation areas are essential and are not always adequate.

On the services studied, the one or two seclusion rooms provided are in general quite adequate.

There is need in planning for careful consideration of the most reasonable alternatives to caring for critically ill patients, and for children on adult psychiatric wards. If the decision is made that such patients will be cared for on adult psychiatric wards, it should be recognized that additional staff and at times, additional space and equipment will be required.

BIBLIOGRAPHY

1. Hediger, H.: *Studies of the Psychology and Behavior of Animals in Zoos and Circuses*. London: Butterworths Scientific Publications, 1955.
2. Pace, R. E.: *Rehabilitation Group Experiment*, unpublished manuscript.
3. Stainbrook, E. J.: *Neuropsychiatry*, 3: 71, Fall, 1955.
4. Cameron, D. E.: *Modern Hospitals*, 87: 51, September 1956.
5. Stanton, A. H., and Schwartz, M. D.: *The Mental Hospital*, Basic Books, New York, 1954.
6. Kirkbride, T. S.: *Hospitals for the Insane*. Philadelphia: J. B. Lippincott and Company, 1880.
7. Osmond, H.: *Function as a Basis of Psychiatric Ward Design*, unpublished manuscript.
8. Osmond, H.: *Some Numerical Aspects of Human Groups*, unpublished manuscript, 1956.
9. Greenblatt, M., York, R., and Brown, E. L.: *From Custodial to Therapeutic Care in Mental Hospitals*. New York: Russell Sage Foundation, 1955.
10. Moll, H. E.: *Can. Med. J.*, 71: 555, Dec. 1954.

DISCUSSION

A. E. MOLL, M.D. (Montreal, P. Q.)—The study of movement presents, in itself, certain difficulties, and a way of dealing with one difficulty is to arrest the movement, at least temporarily, and study the process at that given time. Dr. Ozarin has measured the amount of time spent by patients in the various hospital areas, corridors, wards, etc., and on the basis of her findings, has reached certain conclusions. I would like to point out, however, that the amount of time spent by any individual patient in a certain area, is not necessarily a valid gauge of the therapeutic value of that particular area. For instance, if we were to gauge the importance of the bathroom or of the E.C.T. room on the basis of the time spent by patients in such areas, we might easily reach the wrong conclusion.

The question of locked doors versus open doors or locked wards versus open wards is one that cannot be disposed of in only a few words. However, in the psychiatric department of the Montreal General Hospital we have no locked doors nor even security

doors on our windows, and yet the department is located on the fourth floor. All windows can be opened and the patients are allowed complete freedom to circulate wherever they may wish, even though some of them are acutely disturbed, severely depressed or entertaining suicidal intent. Locked doors and barred windows cannot but provide the atmosphere of a jail, where nurses, trained attendants, residents, etc., assume the attributes of jailers and the patients the demeanour of jaillees. The extension of the body image is a silent and all-pervasive one. The elimination of locked doors and security windows, of course entails adequate and competent nursing staff. It also entails a certain amount of selectivity in the types of patients admitted, but seriously enough, it is usually the anxiety of the nursing and attending staff that dictates the type of patient that can be admitted, rather than the severity of the illness of the patient.

Re: the question of psychiatric wards versus closed units or single rooms—it has been my fortune to have had experience in both settings. In my opinion both settings offer advantages and disadvantages. The acutely depressed patient wants to be left alone and, so to speak, to hibernate. Regressive phenomena are not necessarily always a bad thing. Regression at a certain stage of a disease process may actually be helpful rather than harmful. For such cases a single room may prove to be of therapeutic

value, at least during a certain phase of the disease process. This brings up the question of the therapeutic value from socialization on the part of the patient. There has been a tendency of gauging the rate of improvement of patients according to the degree of socialization they have shown. I would like to suggest that at times, and in certain settings, the degree of socialization is not necessarily a valid gauge of the degree of improvement.

CONCLUSIONS

1. The physical structure of the psychiatric setting can and does play an important part as a therapeutic agent.
 2. The goal in planning a psychiatric department should be that of offering patients and staff an environment where the patient *can* get well.
 3. The environment is just as important for the staff as it is for the patients and one affects the other.
 4. We haven't yet tapped the rich therapeutic resources available from an optimal environmental setting.
 5. More research is needed in order to define what is an optimal environmental setting.
- Dr. Ozarin's efforts in this direction are to be highly commended.

REHABILITATION OF THE MENTALLY ILL: IMPACT OF A PROJECT UPON HOSPITAL STRUCTURE¹

MILTON GREENBLATT, M.D.,² DAVID LANDY, PH.D.,³ ROBERT W. HYDE, M.D.,⁴
AND J. SANBOURNE BOCKOVEN, M.D.⁵

Since November, 1955, the Massachusetts Mental Health Center (Boston Psychopathic Hospital) has been engaged in a research and demonstration project on "rehabilitation of the mentally ill."⁶ Our commitment to this large effort tacitly admits that few benchmarks exist as guides in developing frontier areas in emotional and social reintegration, although a great deal of relevant experience has accumulated. The project was planned to study a variety of services now available to patients and to develop new services within a research framework.

We conceive of mentally ill patients as having considerable untapped potentialities for successful rehabilitation. Previous investigations at Massachusetts Mental Health Center⁽⁴⁾ and other hospitals had convinced us that upgrading of patients could be achieved by social manipulation within the hospital setting. We felt that intensive efforts of the same general type directed to rehabilitation in the community would also be successful.

Although little was known systematically about after-care of patients, their resettlement in the community and prevention of relapses, it was nevertheless assumed that a wide range of methods might be valuable, and that an open "experimental" approach

should be followed. The experiences in England and the continent, especially in Rees' Hospital at Warlingham Park, Jones' Clinic in Belmont, the pioneering explorations of Bierer with social therapeutic clubs and half-way houses, and family care programs of the Gheel type would all have to be considered. Day and night programs appeared to warrant intensive study. Programs of the member-employment type at Brockton V. A. Hospital embodied promising trends. The possibilities inherent in cultivating employer cooperation and aiding in their education about emotional illness could not be neglected. Family guidance and employment services appeared to have their place.

Our operational approach was inclined to view optimum rehabilitation as a combined effort of 3 agencies: 1. the *patients*, through their own efforts via instrumentalities like patient government and the ex-patient club; 2. the *hospital*, via the community clinic, an outpatient organization servicing ex-patients which tries to establish a vital link between patient and community, is geared to mobilize all available hospital services for the patient's benefit—psychotherapeutic (individual and group); sociotherapeutic (including day program and ongoing social activities); occupational and recreational; and physiotherapeutic (drugs, electric shock, etc.); 3. the *community*, committed to patient rehabilitation as early and comprehensively as possible.

Research centers around these questions:

1. What are the rehabilitation needs and potentials of discharged patients?

2. To what extent are these needs and potentials currently being met?

3. How can service be improved or altered, and what new services can be developed to meet these needs?

4. How can the techniques and procedures be identified and analyzed for optimal communication to others in the field?

We wish to discuss briefly some effects of the project on the functioning and organization of the hospital. Some of these resultants

¹ Read at the 113th annual meeting of The American Psychiatric Association, Chicago, Ill., May 13-17, 1957.

² Assistant Superintendent and Chief of Research, Massachusetts Mental Health Center; Assistant Clinical Professor of Psychiatry, Harvard Medical School.

³ Research Anthropologist, Rehabilitation Project, Massachusetts Mental Health Center; Research Associate in Anthropology, Harvard Medical School, Department of Psychiatry.

⁴ Superintendent, Butler Hospital, Providence, Rhode Island.

⁵ Director, Out-patient Department and Day Hospital, Butler Hospital, Providence, Rhode Island.

⁶ For financial support of this project, we are indebted to the Office of Vocational Rehabilitation of the U. S. Department of Health, Education & Welfare.

might have been predicted from a general knowledge of research efforts of behavioral scientists in action programs and from specific knowledge of our hospital organization (3, 4). But certain phenomena belong in the class of what the sociologist Merton refers to as "serendipity" or unanticipated consequences of research (10). It will be convenient to discuss these tentative findings within a breakdown according to professional segmentation.

THE PSYCHIATRIST

An increased strain upon the psychiatrist is evident because of the necessity for keeping abreast of all of the patient's interests and gathering data from the many participants in his treatment program in order to develop an integrated picture of his life. Besides creating more "administrative" work, the project appears to have threatened the psychiatrist in several ways. It becomes necessary to temper his highly prized individual psychodynamic point of view with practical considerations relative to the patient's 24-hour day and transition to the community. Many psychiatrists would rather be concerned with the details of intimate transference and counter-transference problems than with spelling out the specific way in which this particular patient with his handicaps could fit optimally in society with the aid of social worker, training officer, placement officer and employer. It must be remembered that just as the psychiatrist often lacks a social orientation that might permit him to utilize the social environment of the hospital more successfully, so he lacks a community orientation in which the specific problems in adjustment to the patient's own culture are paramount.

The psychiatrist is also threatened when non-medical workers often show more therapeutic success than he is able to demonstrate; that is, occupational therapist, social worker, placement officer, and so on, sometimes get more therapeutically involved with the patient and appear to have had more of a salutary influence upon his clinical course than has the psychiatrist.

Even those resident doctors who have a social as well as a psychological orientation have been frustrated by lack of knowledge

as to just how to make rehabilitation referrals, when, and to whom. In part this is due to faulty communication between doctor and special services, based on mutual threats not fully resolved. The nature of these threats is not altogether clear, but there is evidence not only of professional jealousies regarding the "aspect" of the patient that is handled by different services, but also fear that the doctor may try to control the patient's progress too much and perhaps vitiate the efforts of others, or that he will not control it enough and leave too much therapeutic responsibility in the hands of non-medical professionals. One result of this is that rehabilitation services have frequently been a "dumping ground" for (a) therapeutic failures, who are considered beyond rehabilitation, (b) patients whom the doctor is not seeing in therapy and in whom he has little interest, or (c) patients who seem obviously self-rehabilitatable and for whom special rehabilitation services are not only unnecessary but even contraindicated. However a perceptible trend in more recent months has been toward a better understanding on the part of many doctors as to the possibilities and limitations of the rehabilitation team and more appropriate referrals for rehabilitation services are being made.

THE SOCIAL WORKER

The social worker's situation is exceptional. She formerly had the chief responsibility for smoothing the transition of patients into the community, carrying on multiple functions of family therapist, job placement and social rehabilitation. With the advent of a rehabilitation project, it seemed that her domain was being split up with placement, job counseling and job training being given to other persons. With some justification the social worker felt that not only did she now have to allocate certain traditional functions to others, but that these others were not as well qualified by training or experience to dispense such services. Such frustrations engendered overt anger which was met in turn by the anger of others who felt that their potential contribution was not sufficiently appreciated.

To a large extent the problems of the social worker have been met by recognition of

the centrality of her role in rehabilitation and the importance of both her skill and clinical experience. In addition, special studies have been launched to investigate in detail her techniques and activities, in which a social worker trained in the hospital organization is the essential researcher. Since this was planned initially with the cooperation of the social service department there has already been a lessening of tensions between social work and other specialities and a growing capacity to work together.

THE NURSE

Like the social worker the nurse, though traditionally a key member of the hospital's rehabilitation team, felt her role was neglected by the project. In the past few months we have been studying the nurse's role intensively through a full-time participant observer, a graduate student in psychology who had had several months of experience as a psychiatric aide on the acute wards. As with the social work phase, this study was planned with the collaboration of the Department of Nursing and in particular the charge nurses of the male and female convalescent wards, who are most affected by the study. The very existence of the study has resulted in greater nurse participation in the project's work and a friendlier relationship between us.

There is considerable evidence that the nurse plays a major role in the general effort to mobilize the patient's resources, to provide a constant and stable figure in a dynamic and ever-changing hospital system, and to extend the daily warm care and firm hand that the socially deprived and dependent patient requires. Her daily concern with his needs helps provide a necessary span between the fantasy world of psychosis and the real world of the outside community.

Included in this research are the roles of the nurse's assistants: the psychiatric aide and the student nurse. The latter, incidentally, have received assignments not only on the ward, but in almost every aspect of broad hospital treatment, including occupational, industrial and recreational therapy. While the charge nurse is often burdened with administrative chores the aide and the student find the time to maintain nurturing relation-

ships with patients and their efficacy has been reported by the patients themselves.

THE OCCUPATIONAL THERAPIST AND INDUSTRIAL THERAPIST

The occupational therapist has been stimulated to look into her own role in the total treatment process, especially the meaning of work and play to the individual patient. Especially provocative has been the recent suggestive paper by Azima and Wittkower (2). This survey of occupational therapy departments in several hospitals in the United States and Canada showed that the occupational therapists did not know very much about dynamic psychology, nor did the psychiatrists with whom they work have a clear understanding of the function of occupational therapists. The OT worker has in general been less threatened by our project than other services and a willing cooperator from its inception. After working through their own feelings on the subject, the OT department has voluntarily relinquished its dual functions of supervision of both occupational and industrial therapy. The latter area, formerly split as a part-time assignment among several occupational therapists, is now coordinated under a single industrial therapist.

All work tasks involving patients in the hospital now come under the overall coordination of the industrial therapist. Significant changes in the functioning of the hospital's industrial program are beginning to occur. Communication and coordination regarding the patient's work activities have been enhanced so that the flow of patients, and of information about them, between the ward and the many work areas is smoother. Individual scaled rating sheets for each patient's work—seen in the total treatment context—are being issued weekly by hospital employers, so that we shall soon have a more objective yardstick of how patients fare in each of the activity areas, their progress over a period of time, and an indication of which activities are most effectively utilized by given types of patients.

Employers have a reawakened interest in their own role as work therapists. Their problems and those of patients under their supervision are now discussed weekly in group session under the guidance of a case

worker and the industrial coordinator. As they gain increasing insight into their own functioning they learn to handle patient problems better and to be more cognizant of their own counter-transference feelings.

VOCATIONAL PLACEMENT OFFICER AND COUNSELOR

On a part-time basis the hospital has the services of an experienced vocational counselor on loan from the State Division of Vocational Rehabilitation. She operates as an integral member of the rehabilitation team, counseling patients in the area of vocational education and training. Where they seem prepared and intrinsically motivated—not moved by expedients arising out of sick behavior—and meet the legal requirements, she aids them in getting financial assistance toward additional vocational training or education. She has excellent relations with the case work and medical staff and while there was some initial problem between her and the placement counselor, due to differences in rehabilitation philosophy and method, at present both seem to be moving toward a *modus vivendi*.

The placement counselor came to the project with a background in academic psychology and experience as a vocational counselor in the tuberculosis field. At first his enthusiasm for helping patients at times clouded his judgment in assessing their capabilities and motivations, and particularly their readiness to move into the kind of independent roles that employment in the community usually demands. However, as a result of new experiences in the psychiatric setting he has grown considerably in his understanding of patients and now works with more sophisticated judgment toward his goal of vocational placement of patients. His differences with the social work staff loomed large in the early stages of the project, but gradually there has been less threat and more recognition of mutual contribution towards shared goals. He also functions as the industrial therapist; thus an intimate knowledge of the patient's occupational behavior in the hospital provides a substantial foundation for reintegration into the vocational system beyond the hospital's doors.

Recently the placement counselor completed a study(7) with the social scientist of the receptivity of community employers contacted during his placement efforts to hiring the emotionally handicapped. We were gratified to learn that nearly 80% were positively oriented toward employing current or former psychiatric patients. In another study of 40 male ex-patients followed up 1 to 2½ years after discharge, 75% were actually employed at the time of the follow-up. Nearly 25% of the total sample returned to work for employers who already knew of their illness and an additional 33% informed employers that they had been mental patients on the first job after discharge. Thus, 58% of employers on the first job after leaving the hospital knew of the psychiatric illness of these men but voluntarily cooperated in aiding their vocational resettlement(8).

THE PATIENT

Although the patient is the object of the numerous complex activities called rehabilitation, he is often the "forgotten man" in the process. As Seidenfeld(12, 13) and others have suggested, rehabilitation specialists usually deal with a "piece" of the patient's life. Except at a comprehensive staffing by all members of the rehabilitation team, the approximation to a configurational understanding of the patient is not always attempted or experienced by the individual rehabilitator. Everyone pays lip-service to the ideal of perceiving the "whole man," but professional and academic compartmentalization still hamstrings efforts toward optimal assessment of the total person.

Our ward observation studies have already indicated the vital and unsung role of patients in helping to rehabilitate each other. Albeit naïvely and unconsciously, perhaps the key role in the process is played by the patient himself.

Not only is informal patient-patient interaction a powerful force in the patient's life but he also has opportunity to play a considerable part in formal patient organizations. Apart from social and recreational groups he is a member of a ward group(4, Chap. 6) that meets weekly with the nurse

in charge to discuss conditions of ward living and ways and means to improve their environment and relationships. In addition, each ward is related to patient government (5) by elected representatives and all patients who are interested attend weekly patient government meetings presided over by their own officers. Patient government has been for many years an active, dynamic force for improving hospital life for all. It sends weekly reports to the assistant superintendent and occasional delegates to discuss a variety of problems related to their welfare. Everything possible is done to meet their suggestions, demands or expectations.

Day Hospital.—Some time prior to the inception of our project the hospital instituted a day-care program under the supervision of a social worker and the direction of a psychiatrist. Since November 1955 the day program has been incorporated into the rehabilitation program and has functioned with a large measure of success as a bridging device between hospital and community for patients who are ready to live at home but still depend on the relatively non-demanding hospital culture for routine activity. A day program recognizes two essential facts:

a. There are many convalescent patients who for primarily medical reasons, principally the increasingly pervasive use of tranquilizing drugs, need the supervision of a trained person, preferably a nurse.

b. Researches in social psychiatry and the experience of the hospital and its outpatient clinic indicate that many persons in the community too sick to adjust under normal conditions can make use of hospital facilities as part of a total treatment program without the necessity of hospitalization with its stigma and inherently disruptive influences on the family and social structure.

In January of this year the day program, now referred to as the day hospital, was reorganized under the supervision of a social worker and a nurse who has had experience in the social psychiatric techniques of Maxwell Jones' (6) unit in Belmont, England. The day hospital has its own ward and its own psychiatric chief of service. It is too soon yet to evaluate this program adequately, but the fact that it was undertaken with the active collaboration of the nursing service

and in charge of a nurse recruited from the hospital staff has made for a minimum of intra-staff tensions. It is, like all new programs, deeply concerned with the problem of more clearly defining its functions, its limits, and overall objectives, and of specifying more sharply the types of patients it should handle. Currently around 35 patients are in the day hospital, the vast majority representing ex-patients; a few representing patients referred directly from the community, for whom day care means prevention of hospitalization.

On a more informal basis there is a night-care program, operating on a very short-term basis, for some patients who while still convalescing wish to obtain community employment before attempting to live on the outside. This program has operated for many years in the hospital, and for certain patients seems an ideal intervening measure before making the final break with hospital culture.

Halfway House.—Great interest attaches to the rehabilitation possibilities of a halfway house. There are relatively few such facilities in America or England. We have had two years' experience with a halfway house for women run jointly by the hospital and a local philanthropic agency. Eight to 10 ex-patients are in residence supervised by a specially trained group social worker. They work, pay rent and cooperate in running the home. The maximum duration of stay is 6 months. Altogether about 35 women have utilized this facility and preliminary study indicates that it is a highly successful endeavor. There is a need for more housing facilities of this type for persons who either have no home to go to, are at odds with their family, or need the continued support of group living with close supervision by a house mother and the contact with the hospital.

Social Therapeutic Club.—These clubs abound in England and are growing in America. Our last survey done about a year ago (11) indicates around 22 therapeutic clubs in existence in America: "Recovery, Incorporated," which stems from the work of Abraham Low (9), has many branches in many states. Our social therapeutic club, known as Club 103, is an active, ongoing

organization which, despite changing personnel, manages to get a good deal of work done. It has headquarters in a house across the street from the hospital, which the patients have refurbished through their own efforts. They carry on social, recreational and educational functions, raise money and give mutual help to each other. Numerous testimonials by members of this club and others in the country suggest high therapeutic value of club membership for many patients who are otherwise socially bereft. There are indications that the club can reduce readmissions and can facilitate the process of gaining roots in the community. Such organizations need intensive study from the standpoint of hospital-club relationships, degree of autonomy needed, optimal organizational pattern, and so on.

In following the patient into the community, our preliminary researches indicate that while many of them can use additional counseling and training, at the vocational level most of them, with varying degrees of effort and experimentation, are able to make a reasonable adjustment(8). Often there is a period of vocational experimentation, particularly in the case of the schizophrenic patient, before settling into a congenial job situation. Not infrequently there is conflict over whether to tell employer and friends about their history of hospitalization. But for most of our discharged patients, the rehabilitation potential, still inadequately assessed(1), seems high enough to warrant cautious optimism.

These experiences have taught us that patients are themselves often most acutely aware of the measures necessary for their social reintegration and should be tested out at all stages of their development as to their potential for assuming increasing responsibility for their rehabilitation. On numerous occasions we find that they can act positively and decisively where practical considerations may cause administrative hesitations and waverings.

CONCLUSIONS

The Rehabilitation Project of the Massachusetts Mental Health Center has been based on the conceptions that mentally ill patients have untapped potentialities for suc-

cessful adjustment, and that optimal work in the field would require mobilization of patients, hospital and community resources in a comprehensive effort.

The introduction of a new program requiring close collaboration of many services and disciplines has had a noticeable impact on hospital structure. Some role groups, especially psychiatrists and social workers, appear to be threatened by the new emphasis. Other role groups such as nurse, occupational and industrial therapists, have enjoyed a reinforcement of their status, and increased value seems to be attached to their functions.

The experiences thus far with day hospital, halfway houses and social therapeutic clubs indicates that these methods have specific value in selected cases. Intensive investigation is underway to determine optimum relationship between the special facilities and hospital organization, degree of autonomy needed by patients, and factors determining success or failure of patients in utilizing different rehabilitative procedures.

BIBLIOGRAPHY

1. Abt, L. E.: Comments in Seidenfeld, M. A., and others. *Am. J. of Orthopsychiat.*, 27:1, Jan. 1957.
2. Azima, H., and Wittkower, E. D.: *Am. J. of Occupat. Therapy*, 11:1, Jan.-Feb., 1957.
3. Barrabee, P.: *A Study of a Mental Hospital: The Effect of Its Social Structure on Its Functions*. Ph.D. Thesis, Harvard University, 1951.
4. Greenblatt, M., York, R. H., and Brown, E. L.: *From Custodial to Therapeutic Patient Care in Mental Hospitals*. New York: Russell Sage Foundation, 1955.
5. Hyde, R. W., and Solomon, H. C.: *Digest of Neurol. and Psychiat.*, 18:207, April 1950.
6. Jones, M.: *The Therapeutic Community*. New York: Basic Books, 1953.
7. Landy, D., and Griffith, W. D.: *Employer Receptivity Toward Hiring Convalescent and Former Psychiatric Patients* (unpublished).
8. Linder, M. P., and Landy, D.: *Post-Discharge Experience and Vocational Rehabilitation Needs of Psychiatric Patients*. (To be published in *Mental Hygiene*.)
9. Low, A.: *Mental Health Through Will-Training*. Boston: Christopher Publishing House, 1952.
10. Merton, R. K.: *Social Theory and Social Structure*. Glencoe: Free Press, 1949.
11. Palmer, M.: *Unpublished Manuscript Prepared for the Rehabilitation Project, Massachusetts Mental Health Center*.
12. Seidenfeld, M. A.: *Public Understanding of Rehabilitation*. Keynote Address to Annual Meet-

ing, National Rehabilitation Association, Denver, Colorado, October, 1956 (unpublished).

13. Seidenfeld, M. A., and others. *Am. J. Orthopsychiat.*, 27: 1, Jan. 1957.

DISCUSSION

FRANKLIN S. DUBOIS, M.D. (New Canaan, Conn.).—The authors of this important contribution are to be congratulated on their broad and realistic approach to the vast problem of rehabilitating the mentally ill. While optimistic in their view that mentally ill persons have significant potentialities for rehabilitation, they likewise point out that such potentialities must be adequately assessed in future studies before enthusiastic optimism for rehabilitation can be wholeheartedly endorsed.

The soundness of the long term research program envisaged by Dr. Greenblatt and his associates is attested by the wisdom with which they have selected their first area of investigation, the effects of such a program on the hospital and on the individuals that make up the rehabilitation team. All too often the primary approach to the problem of rehabilitation centers around what are frequently interpreted as unfortunate and even uncooperative attitudes on the part of the patient. But in the present study the authors reverse the process and come to grips with the more fundamental issue of how an effort to help the patient reassume his place in the community affects the personnel involved in the effort. Seemingly, from the authors' observations, every member of the rehabilitation team is threatened to a greater or lesser extent

by the execution of the program and accordingly, each individual reacts in a defensive and sometimes hostile manner. Such feelings and actions on the part of the members of the team would presumably affect deleteriously the rehabilitation of patients; hence, one might conclude from this provocative study that the first and perhaps paramount problem to be resolved in the initiation of any program of rehabilitation is to harmonize the divergent attitudes of those participating. Thus the psychiatrist, who usually directs the program, is faced with a problem in interpersonal relationships either before or certainly shortly after the project gets underway. It is interesting and important to note that the authors stress the insecurities and vexations of the psychiatrist himself as he participates in such a program. They tacitly indicate that he must relinquish his active interest in intimate psychodynamics and cultivate a practical perspective that will enable him to assume a role of leadership in guiding other members of the team in their efforts to help the individual patient fit "optimally in society." This, it seems to me, is the core of the thesis that Greenblatt and his co-workers present. First the psychiatrist must achieve emotional harmony within himself before he is qualified to lead: then he is in a position to normalize the different points of views of the other members of the team and infuse them with the enthusiasm, the wisdom and the warmth that make practical goals attainable. This high level of group morale fosters high motivation in the individual patient and these two emotional drives overcome many of the obstacles that the mentally ill patient inevitably meets as he returns to extramural life.

HOMEMAKER SERVICE IN PSYCHIATRIC REHABILITATION¹

C. KNIGHT ALDRICH, M.D.²

INTRODUCTION

Although an emotional illness presents problems of adaptation to members of the patient's family in any circumstances, the problems are most disturbing and far-reaching in their effects on family solidarity when the patient is the mother of young or adolescent children. Children inevitably suffer from separation and loss of maternal support whenever a mother is hospitalized for any reason, but when the mother is mentally ill the children must also cope with their own concept of mental illness: *i.e.*, a condition which to them is certainly mysterious, perhaps shameful, and often treated by friends or schoolmates with derision. Moreover, during the early phases of her illness, the mother's attitudes or actions may have estranged or frightened the children. As a result, the children often develop ambivalent feelings, which are followed by guilt and self-condemnation when the mother leaves for the hospital.

Cheryl, aged 6, had been a reasonably well-adjusted child before her mother was committed to a state hospital for treatment of paranoid schizophrenia. Shortly thereafter Cheryl was reported to be "wistful and clinging, wondering if mother had gone to the hospital to have another baby. She worries constantly, thinks she is naughty and wishes she could go to heaven. She repeatedly asks: 'I have been a good girl today, haven't I?'"

The patient's husband may experience ambivalence, anxiety, shame, guilt, and estrangement, which lead to preoccupation with his own reactions and an inability even to give the emotional support he customarily offers his children, to say nothing of the added comfort they require at this time. Although the husband may receive casework help in understanding his wife's illness as part of the psychiatric treatment program, the caseworker usually focuses primarily on the interaction between the patient and the rest of the family, and gives secondary con-

sideration to the day-to-day problems of the children.

Care of the children is most often assigned to relatives, who may or may not welcome the opportunity. If the plan requires the children to move out of their home, it usually means the loss of many of their sources of security: father, friends, school, and familiar surroundings. If the children are distributed among various relatives they lose the security of each other's presence. When a relative moves into the house to take over the children's care, consequent tensions within the family may complicate the picture.

Families without available relatives try various alternatives, none of which is completely satisfactory. Housekeepers are hard to find, and prefer to avoid homes where children are upset; the patience of the neighbors wears thin; and there are serious psychological hazards in turning over the mother's responsibilities to an older daughter.

When Mrs. C. was committed to a state hospital her 12-year-old daughter undertook the care of 3 younger siblings. In her new role in the home, she conferred with her father about domestic problems and the care of the children, and in other ways took over many of the responsibilities and prerogatives of a wife and mother. Superficially she appeared to enjoy the opportunity to take her mother's place, but at the same time her father noted that she had become anxious and apprehensive in her relationship to him, that she complained of insomnia and nightmares, and that she had become unreasonably possessive of the baby.

When other alternatives fail, the father may be forced into placing the children in temporary foster homes, an experience which, however well carried out, cannot help but add another increment of insecurity for the children.

When a young woman went to the hospital with schizophrenia, her husband, upset, depressed and unsure of himself, made rather precipitate plans for foster home care for their two children. The children, confused, perplexed and distressed, suffering from the double loss of both mother and father at the same time, attempted to establish some kind of relationship with the foster parents. Meanwhile the mother improved and returned home, but became very upset because the children were in the

¹ Read at the 113th annual meeting of The American Psychiatric Association, Chicago, Ill., May 13-17, 1957.

² Address: 950 E. 59th St., Chicago 37, Ill.

care of somebody else, and insisted on their return. Almost immediately thereafter she relapsed, and the whole pattern repeated itself.

DESCRIPTION OF HOMEMAKER AND SERVICE

In many communities a more satisfactory alternative is provided. One hundred twenty-eight social work agencies in this country provide *homemaker service* to care for children in their homes when the parental function is impaired. Homemakers are women who are part of the agency staff, who are trained and supervised by caseworkers, and who work primarily in homes where the mothers of young or adolescent children are temporarily and unavoidably absent. Homemakers are chosen for their interest in children, their ability to get along with people, and their homemaking skills. They usually have enjoyed family life and have been successful as parents of children who are now grown. Casework is an integral part of homemaker service; it is used both in determining its appropriateness for the particular family under consideration, and in helping the family to make the best use of the service and to work out associated problems.

Although originally developed to provide substitutes for mothers with physical illness, this program has found gradually increasing application in homes where the mother is suffering from mental illness. In some agencies more than a quarter of all the homemaker assignments involve cases of mental illness. To my knowledge, however, there is nothing in the psychiatric literature which describes it, and psychiatrists generally either do not know of its existence, or know too little of its nature and indications to work efficiently with the supplying agency. The optimal functioning of homemaker service in families where the mother is mentally ill depends to a major degree on familiarity of the psychiatrist with the extent and limitations of agency services as well as on familiarity of the agency with the treatment goals of the psychiatrist.

The object of this paper is to clarify homemaker service for the psychiatrist. Once psychiatrists know of its existence and understand its operation, I feel confident that they will find it a new and valuable adjunct

in the treatment and rehabilitation of many of their patients. Furthermore, awareness of its potential value may encourage psychiatrists to use their considerable community influence to support its development and extension.

The material of the paper is derived from my experience over several years as psychiatric consultant for the Minneapolis Family and Children's Service, as participant in their training program for homemakers, and in collaborative work with the agency in a few cases where a mother of young children was my patient. My illustrations are drawn from the records of 16 cases which were presented at consultation seminars during a 4-year interval, and which were selected from over a hundred cases in which the agency participated in that period.

PREREQUISITES FOR HOMEMAKER SERVICE

Homemaker service is indicated for families in which the mother of young or adolescent children is mentally ill under the following 6 conditions:

1. *If the father or other responsible adult is living in the home.* This requirement is essential since it is impractical for social agencies to take full responsibility for families. Furthermore, the goal of homemaker service is the maintenance or reconstitution of the family; one of its major advantages over foster home placement lies in the fact that the father is kept in close contact with his children during the period of disruption caused by the mother's illness. His home and his children sustain him in his deprivation and may give him the support necessary for him to maintain the integrity of the home, which in turn makes it possible for the mother to return to familiar surroundings for her convalescence.

2. *If the illness appears to be temporary,* or during the period that plans for permanent care are being developed. Although the accepted limits of homemaker care have increased from a few weeks to a year or more, most agencies cannot yet undertake indefinite care. If it appears unlikely that the mother will ever return, an alternate plan, tailored to the specific needs and resources of the family, may be necessary. Often the agency may help the family work towards the develop-

ment of a suitable permanent plan, meanwhile providing temporary homemaker service to allow enough time for the details to be worked out. A temporary solution without radical change in the family structure can protect the father from taking immediate steps out of desperation, steps which may damage the security of the family or in other ways prove unsatisfactory.

3. *If the family participates in casework.* In homemaker service, as contrasted to housekeeping services, the agency takes casework responsibility for the welfare of the children and hence must maintain contact with adult members of the family as well as with the homemaker. The homemaker's primary responsibility is child care rather than housework. Since she does not have professional training she relies on the caseworker for much of her understanding of the specific problems of children deprived of their mothers. To give adequate guidance the caseworker must know the details of the family situation. The caseworker also clarifies the homemaker's function with the father, and in so doing helps him to maintain his role in the family. In regular contacts with the father, she may also be able to help him understand some of his own feelings concerning his wife's illness. Casework participation may forestall the tendency of some fathers to delegate all parental functions to the homemaker, and the tendency of others to limit the homemaker to housework and menial duties.

Casework may be even more important with the mother during her convalescence as illustrated by the following abstract of a record of casework interviews with Mrs. P., a convalescent patient, concerning her relationship with Mrs. H., the homemaker:

For the first two weeks Mrs. P. was home from the state hospital she seemed very happy with homemaker service. She then began to feel guilty that she needed a homemaker, and later complained that the homemaker's ability to handle the work and care for the children implied criticism, and seemed to emphasize her own inferiority as a mother. Later Mrs. P. admitted her jealousy of the place Mrs. H. had with the children. Mrs. P. also said that Mrs. H. seemed like a mother to her. She recognizes that a good deal of her reaction to Mrs. H. is a reliving of her relationship to her own mother. Mrs. P. also says that when she is feeling depressed she likes to be alone and doesn't want someone constantly in the house.

From Mrs. H.'s description of Mrs. P.'s depressed days, Mrs. P. apparently withdraws from the reality around her and seems almost in a "trance," not seeing the children and not carrying out her household work. Mrs. P. frequently has asked whether having someone one or two days a week wouldn't be enough. For one week we did have Mrs. H. go in for 3 days, but Mrs. P. seemed frightened at the evidence that her idea of reduced service might be accepted. Although she feels she should manage alone she has a strong conviction that she is unable to. In my discussions around this I have tried to help Mrs. P. look at her resentment of the homemaker as acceptable and natural. I have tried to help her justify having service in order to give her more opportunity to get well. Much of this Mrs. P. can understand on an intellectual level, but she continues to struggle with it emotionally. On one occasion she mentioned "giving" the two youngest children to her sister since she could never be an adequate mother, and on another occasion she was so sure that she was bad for her family that she talked of getting herself re-committed to the state hospital to give her family a chance to escape her.

Through the agency, the state hospital follow-up clinic was kept informed of progress and problems in this patient's convalescence.

4. *If the mother is in the hospital or convalescing at home, but not if she requires psychiatric nursing care or supervision.* Homemakers are not trained in nursing; their primary orientation is toward child care, and they cannot undertake supervision of confused or suicidal patients. Furthermore, since the homemaker's role with a convalescent mother requires unusual tact, flexibility and understanding, an agency may not always be able to provide individuals who can adapt to the situation.

5. *If the agency and the psychiatrist with responsibility for the patient's treatment maintain lines of communication.* On application for homemaker service, the family is customarily asked to sign a release of medical information. Without medical information, the agency cannot properly determine the applicability of its services, and will probably withdraw from a case where medical information is not made available.

This is particularly important when the mother is convalescing at home. Often such a patient will confide in the homemaker or the caseworker. She may reveal the first evidences of relapse, or suicidal preoccupations, or dissatisfactions with treatment to the homemaker. The psychiatrist therefore

should keep posted on the homemaker's observations.

One homemaker reported: "When the 8-year-old boy was leaving for a weekend trip to his grandmother's, I heard his mother say: 'Go ahead and leave me. I'll get well while you're gone. It's you who makes me ill. You are deliberately driving me into my grave.'" The homemaker, although distressed at this incident, did not attempt to interfere with the interchange, but informed the caseworker by phone after she left the patient's home. The caseworker used this and other similar evidence in a later discussion with the psychiatrist and the patient's husband which led to the patient's rehospitalization.

When communication is easy between psychiatrist and agency, the psychiatrist has an opportunity to suggest appropriate attitudes and measures for the homemaker to adopt. Although the milieu cannot be regulated as thoroughly as in a hospital, the caseworker passes on and interprets the psychiatrist's suggestions to the homemaker, who usually can carry them out more objectively than can either a relative or the customary type of domestic help. The psychiatrist can arrange to receive progress reports from the caseworker at regular intervals by telephone or mail.

6. *If the total family plan involving homemaker service is realistic.* The following case illustrates some of the factors leading to the agency's decision that homemaker service could not be provided.

Dr. X. advised Mrs. Y., a mother of 3 small children, to enter a private psychiatric hospital. Mr. Y. was a college student who worked evenings in a bowling alley to support his family. Their income was \$200 a month; Mr. and Mrs. Y. were residents of a neighboring state, and ineligible for local hospital care except in private facilities. Mr. Y.'s hospitalization insurance would cover no more than a small fraction of the hospital bills. The children needed care in the evenings when their father worked, requiring a homemaker to return home late at night with poor public transportation. (Most homemaker services can only supply daytime care.) Although Mr. Y. stated that his wife would be much more upset if the home were broken up or if they returned to their home state, the agency did not believe it realistic to institute homemaker service.

EVALUATION

As with other aids to rehabilitation, it is virtually impossible to demonstrate the re-

sults of this program in clear-cut or unequivocal terms. So many factors enter into each individual situation that no adequate controls can be established, and recourse must be taken to anecdotal evidence.

Thus homemaker service appeared to alleviate the tensions in all 3 of the families mentioned in the first part of this paper. Six year old Cheryl, who thought she was naughty and wished she could go to heaven, became much more relaxed and began to take an interest in school and her friends. In the second case, Mrs. C.'s 12-year-old daughter, relieved by the homemaker of the responsibility of the home, could resume her little girl relationship to her father and avoid the tension associated with the role of substitute wife. The children in the third example, who had oscillated between their own and a foster home, could remain at home, even though their mother continued to have periods of exacerbation and remission. Protected by the homemaker's calm and balanced attitude, they were better able to overlook their mother's peculiarities and give her the encouragement of their support in her eventual convalescence.

Direct and indirect observations of the effects on children, on fathers, and on the patients, therefore, lead me to believe that homemaker service can make a substantial contribution which cannot be duplicated by any other existing service for any group in our society. In most agencies therefore, homemaker care is not restricted to the indigent. Agencies with fee-for-service programs provide homemaker care to any income group, scaling the fee to the income of the patient's family. The following case is typical:

When the mother of 3 small children required sanitarium care for a depression, the psychiatrist recommended homemaker care. The father, a well-to-do executive, could easily have hired a housekeeper through an employment agency. He recognized, however, that a homemaker was better for the children than a housekeeper who did not have the advantages of contact with casework services, or than a somewhat controlling grandmother whose presence in the house would have been a serious threat to the mother. After a few weeks the mother returned from the hospital, then relapsed, and later came home again. Meanwhile the homemaker, bulwarked by the agency, gave consistent support both to the father and to the children

through the periods of transition. She made it possible for the rest of the family to give security to each other during the mother's illness, and for the mother to return to a familiar and organized environment during her remissions.

SUMMARY

Homemaker service contributes substantially to the rehabilitation of mothers of young or adolescent children who require, may require, or have required psychiatric

hospital care. It also contributes substantially to preventive psychiatry through decreasing the insecurity and anxiety of the children involved. The development of homemaker services can be materially assisted by the influence of psychiatrists in their communities.

BIBLIOGRAPHY

1. Aldrich, C. K.: *Child Welfare*, 35: 1, 1956.

CONTROL PROBLEMS IN GROUP THERAPY WITH AGGRESSIVE ADOLESCENT BOYS IN A MENTAL HOSPITAL¹

BELINDA STRAIGHT, M. D., AND SIDNEY L. WERKMAN, M. D.²

Certain adolescents strain the limits of group living as well as of group therapy and bring up the problem of formulating conditions which will permit continued group interaction. Indeed, most mental hospitals find it more convenient to care for their teen-age patients by dispersing them among their adult patients. This avoids some of the tensions and acting out. It is only when continued group interaction is a safe reality that one can utilize usual techniques of a dynamically-based psychotherapy. The problems of supplying and maintaining these conditions are the subject of this paper.

Although many groups of disturbed adolescents have been optimistically started, they usually disintegrate. There is little relevant literature(1). Aichorn(2) emphasized that the most difficult of all children to work with were those with problems of aggression. Eissler(3) wrote of the difficulty of treating delinquents because of their narcissistic quality.

The group to be considered consisted of a core of 8 boys, both white and colored, varying in weight from 120 to 190 pounds, and in age from 13 to 19, all living in the same building in a large public mental hospital. Diagnoses included schizophrenic reaction, catatonic type, mental deficiency with behavioral reaction, sociopathic personality associated with anti-social reaction, emotionally unstable personality and chronic brain syndrome secondary to convulsive disorder. These boys lived on different wards. A total of 15 patients came into the group, but some left to go home or to be transferred to other services. The group of 8 boys remaining had a diversity of symptoms, but the ones of immediate and crucial concern centered about fighting, stealing, homosexual activity, inciting of others, and homicidal acts.

It quickly became apparent that the group's continuation depended upon the handling of the impulse-ridden acting out behavior of these boys who had little evident superego control, almost non-existent frustration tolerance, and the need for immediate translation of anxiety into action. A number of the boys had made homicidal attempts while at reform school, either with or without psychotic episodes, and had to be transferred to a mental hospital. Others had extensive histories of truancy and automobile stealing prior to hospitalization. They had little confidence in adults, having been rejected or ejected from home and previous custodial settings. Their recurrent fighting, running away, stealing and ganging up on weaker patients made them thorny misfits, even in the hospital. Although there were 2 quiet boys, the group was taken over by the impulsive and active members. There were 2 sessions a week. The treatment goal was to see what modifications the patients could make in the control of antisocial aggressive impulses and if they could be helped to fit into a group situation that might carry over to the wards and to the outside world.

The first statement of the first session, made by a dominating, defiant boy from his perch on top of a table was, "I'll be damned if I'll go to a meeting I'm ordered to go to. Nobody can order me around, not even my old man. When I was little I took orders, but now he knows I can knock his block off." In another session one boy said to another "If you say that word again, I'll kill you." The word was said and the fight started. During many of the early sessions, Slim (a boy often engaged in homosexual activity and hated because he knew the sexual needs and fears of the others) was in real danger of being beaten up. He handled this danger by retiring to a sofa in the room and pretending to sleep, or by trying to leave the group. These problems—refusal to attend, fighting, and passive withdrawal—were the ones which had to be faced early in therapy.

¹ Read at the 113th annual meeting of The American Psychiatric Association, Chicago, Ill., May 13-17, 1957.

² Children's Hosp., Washington, D. C., formerly St. Elizabeths Hosp., Washington, D. C.

Anxiety was often expressed through fighting, which included the attempted use of such weapons as ashtrays, chair arms and shoes. Sometimes the boys walked angrily and menacingly about the room, threw open windows, beat the window panes with their fists or tried to burst from the room. There was frequent withdrawal to far corners of the room, attempts to set up competitive subgroups, breaking up of furniture, shouting, and tipping over chairs.

The verbal accompaniment of this action sounded like a group of seals at feeding time. "Nobody gives a good God-damn about me; every doctor I see just shuts the door in my face." Or, they often shouted "All you have to do is let me out and I'll be all right. Everything wrong with me came from being in this hospital." And (about the therapists working with them), "You just do this because you get paid to." They seemed to care less about having requests granted than in stating these fierce, howling, resentful complaints. When this was taken up by the therapists for discussion, the result was often a denunciation of the group, and an attempt to leave it.

There is an enormous distance between the consulting room and the group's therapy room in which, for a long time, words were only a minor obligato to destructive action. The problem, again and again, was how to keep the group going. The play techniques of child therapy were not readily applicable, for these patients would not engage in group play or would handle it disruptively. Nevertheless, it was closer to child therapy than to adult work because it involved considerable reaching out in various ways, tolerance for a great deal of movement, and the need to set and follow through with firm limits. It was found helpful to supply to the boys who remained in the group certain tangible benefits—refreshments during the sessions, and the opportunity of meeting with adolescent girl patients for activities and dances.

The following were felt to be pillars of the treatment: 1. *Strict sameness of meeting place, time and therapists;* 2. *the use of relatively indestructible furniture in a fairly bare room;* 3. *individualization of limits;* 4. *active intervention in fights and in withdrawals from the group;* 5. *pleasurable vari-*

ation of activities such as parties and games for members of the group outside of the regular sessions.

When it was necessary to change rooms, there was much complaining and one patient (Shawn) refused to come. He only returned several weeks later when we began to learn the importance that the sameness of meeting place held for this erratic and changeable boy. At another time, when one of the therapists was unexpectedly absent, a boy asked to go to the bathroom. During this time he stole a watch, an act which did not occur again during the sessions. This need for sameness resembled the bedtime needs of the much younger child who is reassured by the enactment of rituals.

We found, after experience in different kinds of rooms, that the boys felt more comfortable in a room with heavy simple wood furniture. When they were in more elaborately furnished rooms, they picked apart overstuffed chairs, pulled off chair arms, and became preoccupied with hiding the pieces. Whereas, with some children and adults such concern about broken things could have been therapeutically useful, in this group the anxiety was only translated into more destructive action.

It was not possible to apply one set of limits for all the boys. For instance, when Slim, a tormenting clinging boy, said he was never coming back, he was repeatedly brought back to the group by the attendant and experienced relief on being returned. But when Shawn, impulsive, explosive, refused to come it was recognized that he was too upset to be in the group at that time, and he was permitted to stay away. Most of the group made strong demands at some time or other to leave, saying, "This group don't do nothing but get you into trouble," but later were able to express relief that this was not permitted. Thus, attendance was often not a voluntary choice.

Active intervention in fights became necessary right away. During one session the most defiant member of the group hit the smallest member, a boy who acts as homosexual partner for anyone on the ward. At this point, the male therapist and the attendant broke up the fight. Joe then tried to use his shoe as a weapon, but the male

therapist took away his shoe and held him down during the rest of the session. This was followed up by seeing him after the session to emphasize that fighting could not occur during the group meeting. The strength of his impulse to fight and his difficulty in controlling it was recognized, but it was firmly stated that we would prevent the group from breaking up in this way. Following this, Joe was able to play at aggression, then to verbalize some of his aggressive fantasies. He wandered around outside of the circle of chairs, lay on the floor, lifted an ash tray to show the doctor that he would like to hit him, lifted a table high, and said he would like to smash it down on the therapist. Then he was able to bring out the fantasies of making the woman therapist scream by hurting the male therapist, then slapping her and telling her to shut up. He told a dream of being frightened by a girl and cutting her throat. The group tolerantly listened to this, assured him that his thoughts were not too "terrible" for them to accept, then moved on to some of their more immediate concerns. Incipient fights were sometimes averted by questioning or directive statements, such as "Does it seem as though this is the only way of handling it?"

One member was ejected through group vote for a time after it became clear that he could not help himself from being the primary source of the fights. This was permitted by the therapists who agreed that the boy was not able at that time to use the group. Others, while demanding to quit, experienced relief at not being allowed to do so. They seemed to say, "Don't let me quit, even though I complain and holler."

Controls in the sense implied in this paper often appeared to be direct gratification of need rather than the taking away of freedom. Part of the ego deficit seen in these boys was reflected in lack of control over motor apparatus. Therefore, the supplying of controls and restraints afforded relief and a pleasurable component comparable to the satisfaction afforded an infant who is swaddled. In this way inordinate aggressive instinctual energy was prevented from erupting in a harmful way.

A further guarantee of safety to the patients as well as to the therapists was the

presence of 3 adults in the room—the 2 therapists and the attendant. This reflected a realization of the destructive potential of the boys, and an assessment of our own anxiety thresholds. Within this framework we found ourselves able to deal with fights and with menacing gestures in a more useful way than might otherwise have been possible. Later in the work, having set a pattern of limits it became possible for the woman therapist to be alone with the same group.

The use of two therapists permitted the sharing of concerns, and took some of the edge off working with a group which was so intent on destroying itself. At first little differentiation was made between the two therapists, except that more complaints against the hospital were directed toward the male therapist. Later more differentiations were made. Some of the patients identified with the male therapist, and there was more overt hostility toward him, and at times this was accompanied by a protective attitude toward the woman therapist.

The first sessions erupted into anger, fighting, teasing, and bursting from the room. When the group was comfortable that limits were safe and strong, a second phase, a verbal one, followed the action phase. This second phase was one of intense preoccupation with self, the "I just care about my own self" phase. For many months this was the central theme. Over and over the members said "I can't put myself in nobody else's shoes. I just think about me." Shawn spoke of "What a man does is his own business. He should be able to jump off the Empire State without it being somebody else's business."

From this period of "I just care about my own self" the group went on to complain that no one else cared for them. "I wonder if you are asking if we care about you?," asked one of the therapists. This was followed by silence, and then by a violent fight between 2 of the group members on the wards. At this time there were numerous attempts to leave the group. Soon after, the group protected a quiet patient from the verbal attacks of Joe and ejected Joe, for fighting, for several months. Then the early signs of group loyalties began to show and the patients were able to work together at times

for activities, although at other times they destroyed the activities they had asked for. Often cooperation was destroyed by the difficulty in identifying with someone else. For instance, when in joint session with the girls, their plans could not be carried out exactly as they wanted, they could not compromise. "Never mind, forget about the whole thing" was the angry way they often met a compromise suggestion.

A disappointment for the therapists was that more verbalization did not take place at first. However, this was replaced by an acceptance of much movement in the room, and an attempt to use this as material for the work, until the group took it up and used it also.

Overt transgression of the usual morality among some of the members at times increased the difficulty of working with them. This was particularly true when a more vulnerable member of the group was attacked. Antisocial acts within the group made it more difficult for the therapists to empathize with, and reach out toward certain members. With those boys it was necessary to act as superego through a member of the group or to use the group to test the destructiveness (and self destructiveness) of such action. Because of the predominant acting out, and the use of such defenses as denial and projection, it was often many months before a boy would accept the idea

that he had anything to do with his own problems of living.

SUMMARY

This paper deals with group therapy of 8 adolescent boys in a mental hospital. The group was dominated by the impulse-ridden acting out destructive members. How to keep the group going with these boys who were bent on destroying it became the therapists' central problem. The theme of most of the sessions was "I just care about my own self." Pillars of treatment were 1. sameness of meeting place, time and therapists and attendant; 2. relatively bare room with strong furniture; 3. individualization of limits; 4. active intervention in fights and withdrawals from the group; 5. the use of tangible incentives for remaining in the group, that is, extra activities planned such as games and parties with the girls. Special difficulties for the therapists in working with such a group were discussed.

BIBLIOGRAPHY

1. Schulman, Irving: *The Fields of Group Psychotherapy*, edited by Slavson, Chapter on Psychotherapy with Delinquents. New York: International Universities Press, 1956.
2. Aichorn, A.: *Wayward Youth*. New York, Viking Press, 1935.
3. Eissler, K. R.: Ego-psychological implications of the psychoanalytic treatment of delinquents in *The Psychoanalytic Study of the Child*, 5: 97, 1950.

A NEUROPHYSIOLOGICAL TEST FOR PSYCHIATRIC DIAGNOSIS: RESULTS IN 750 PATIENTS^{1, 2}

CHARLES SHAGASS, M.D., AND ARTHUR L. JONES, M.B.³

There is little need to elaborate the statement that present day psychiatry lacks valid objective aids to clinical diagnosis. Except where he suspects a condition with recognized specific organic etiology, there is almost no laboratory information upon which the clinician can call for assistance in a problem of differential diagnosis. This paper presents validating data for a laboratory test which seems able to provide useful information of this kind. We have called this test the "sedation threshold" (1).⁴

The test is a neurophysiological determination, the threshold being the amount of sodium amytal required to produce certain EEG changes. It was developed as an investigative tool for research on neurophysiological aspects of affect. During the course of this work, the relevance of the test for several problems of psychiatric diagnosis became apparent. Some of the relationships between the threshold and psychiatric variables, such as degree of manifest anxiety, were documented in earlier papers (1, 2, 3, 4). These reports were based on considerably less case material than the present analysis of data on 750 consecutive patients. The present paper serves two purposes: 1. to confirm and elaborate earlier findings; 2. to bring together all of the material on the sedation threshold with a bearing on problems of psychiatric diagnosis.

¹ Read at the 113th annual meeting of The American Psychiatric Association, Chicago, Ill., May 13-17, 1957.

² Supported by grants from the Department of National Health and Welfare and the Defense Research Board (Grant No. DRB 9345-04, Project No. D50-45-04) of Canada.

³ Allan Memorial Institute of Psychiatry and McGill University, Montreal.

⁴ The authors wish to thank Drs. J. F. Davis, J. Naiman, J. Mihalik, and A. B. Kerenyi for their contributions to various phases of this research. Thanks are also due to Dr. D. E. Cameron and the members of the clinical staff of the Allan Memorial Institute, who made their patients and their clinical findings available for study.

METHODS

Test procedure.—The procedure for determining the sedation threshold has been described in detail elsewhere (1, 3). A brief description follows: sodium amytal is injected intravenously at the rate of 0.5 mgm./Kg. body weight every 40 sec. while the frontal EEG is recorded. The patient is tested for presence of slurred speech 25 sec. after the beginning of each 40 sec. interval. The injection is continued well beyond the point of slur. Recordings are usually taken from transfrontal and sagittal frontocentral leads; the sagittal recording is measured when there is too much muscle potential artifact in the transfrontal recording. The amplitude of the frontal fast activity produced by the drug is measured to yield what is essentially a dosage-response curve. The typical curve is S-shaped, and contains an inflexion point, preceding which the amplitude of the fast activity increases sharply and following which it tends to plateau. This inflexion point coincides roughly with the time when slurred speech is first noted. In the initial phases of this work we used slurred speech as an auxiliary guide to the sedation threshold, but it has proved to be a rather unreliable indicator. We now use it mainly to indicate whether we have gone far enough with the injection. The sedation threshold is defined as the amount of sodium amytal in mgm./Kg., required to produce the inflexion point in the fast frequency curve. In the first two-thirds of the present material, a hand method was used to measure the curve (1). This method was accurate, but rather laborious. For the past two years, the measurements were carried out by means of an automatic integrator which summates all activity between 17 and 25c/sec. The integrator is described in a paper by Davis (5).

Subjects.—Table 1 shows the sex distribution, age range, and median age of the 750 patient and 45 nonpatient subjects. The nonpatient control group was composed mainly

of young male volunteers. Data showing that the sedation thresholds in this nonpatient group were correlated with the number of anxiety symptoms elicited in a 30-minute interview have been presented elsewhere (2). The patients were the first 750 who received an initial, technically valid, test using the 0.5 mgm./Kg./40 sec. injection rate. Actually 1,031 tests were done to obtain this sample; 66 were technically invalid and 215 were repeat tests.

Diagnostic evaluation.—Table 1 shows the diagnostic breakdown of the patient groups. Patients were classified from hospital case records, using diagnostic criteria which have been outlined in previous reports (2, 3, 4). To avoid a large group of unclassified cases, we attempted to force a diagnostic decision in every case. Consequently there were only 29 patients in the unclassified group; in most of these sufficient clinical information was

lacking. To obtain some estimate of uncertainty of classification, a psychiatrist who had seen none of the patients examined the files of 200 cases. He was asked to make two decisions: 1. whether the case was typical for the diagnosis; 2. whether the case should be classified under another diagnosis. The reviewing psychiatrist questioned the diagnosis in about one-quarter of the cases on the grounds of atypical features. However, in most of the cases questioned, he was unable to suggest an alternative diagnosis which suited the case better. These findings suggest that, if other workers were to reclassify the case material according to the same diagnostic criteria, the clinical data would remain essentially unchanged.

A few comments about the diagnostic groups may be indicated. The group, borderline schizophrenia, is similar to the pseudo-neurotic schizophrenia group of Hoch and

TABLE 1
AGE, SEX, AND SEDATION THRESHOLD BY DIAGNOSIS

Group	No. subjects		Age		Sedation threshold (mgm/Kg)		Percent 4 mgm/Kg or more
	Total	Males	Range	Median	Mean	S.D.	
Nonpatient controls	45	34	17-45	21.2	3.09	0.73	15.6
<i>Psychoneuroses</i>							
Conversion hysteria	31	9	16-62	33.1	2.79	0.54	3.2
Hysterical personality	40	9	21-64	40.5	2.71	0.53	0.0
Mixed neurosis	54	17	18-70	38.3	3.40	0.71	35.2
Anxiety hysteria	22	4	20-56	36.7	3.91	0.84	54.6
Obsessive-compulsive	13	7	18-47	30.8	4.42	1.00	69.2
Neurotic depression	94	32	19-71	41.1	4.78	0.96	90.6
Anxiety state	54	26	19-68	35.3	5.27	0.88	98.1
<i>Psychoses</i>							
Organic psychosis	25	13	38-78	62.5	1.94	0.67	0.0
Psychotic depression	153	63	23-80	53.7	2.81	0.72	5.2
Paranoid state	12	7	19-56	46.0	3.00	0.50	8.3
Manic, hypomanic	10	2	26-63	41.2	3.45	0.82	40.0
Schizo-affective	16	5	24-55	37.5	2.84	0.70	6.3
Acute schizophrenia	19	11	16-46	26.5	2.66	0.69	0.0
Simple schizophrenia	12	10	17-31	25.0	2.67	0.69	0.0
Chronic schizophrenia (except simple)	56	27	17-51	29.4	4.27	0.89	71.3
"Borderline" Schizophrenia ..	47	27	17-52	30.5	4.70	1.17	83.0
<i>Miscellaneous</i>							
Thyrotoxicosis	11	4	18-51	37.5	4.17	0.19	63.6
Alcoholism and addiction	36	21	23-72	41.9	4.00	1.27	61.1
Character disorder	8	4	16-45	28.3	3.56	0.73	37.5
Neurosis and organic cerebral disease	8	3	17-58	35.0	2.94	0.77	12.5
Unclassified	29	13	17-71	43.3	3.52	1.16	34.5
Total patients	750	314	16-80	39.6	3.65	1.26	42.0

Polatin(6). The distinction between acute and chronic schizophrenia was based simply upon duration of symptoms, the duration being less than one year, and usually less than 6 months, in the acute cases. It should be noted that the chronic schizophrenic patients were "ambulatory" rather than "mental hospital" type patients; few had ever been committed to the equivalent of a state institution. The classification of the psychoneuroses followed conventional lines, except perhaps for the category of hysterical personality; this was assigned to emotionally immature, histrionic patients, whose complaints appeared to be communicative in nature. Patients classed as anxiety hysteria were predominantly phobic. Patients with neurotic depressions and anxiety states were generally of obsessional personality type, and were hard to differentiate, the distinction between them being made according to whether anxiety or depression predominated.

There were 11 patients with thyrotoxicosis, who were collected for a special study of this disorder. The group, "alcoholism and addiction," was composed almost entirely of alcoholics. The data for this group were treated separately because of the possible influence of alcoholic intake upon the threshold. This was not strictly necessary, because a detailed study of psychiatric patients with alcoholism showed that it exerts no specific influence on the sedation threshold(7). Although the sedation threshold was higher than average in alcoholics, this was a function of the symptom picture and personality factors in the same way as with nonalcoholic psychiatric patients. The data for patients with thyrotoxicosis suggested a similar conclusion.

Only 8 patients were given a diagnosis of character disorder. This is an artificially low figure, insofar as the classification scheme emphasized symptoms. If we had emphasized character disturbances rather than symptoms, the size of the character disorder group would have been much greater. The group, neuroses and organic cerebral disease, consisted of patients in whom such diseases as multiple sclerosis and epilepsy were coexistent with a neurosis.

Reliability.—The test-retest repeatability of the sedation threshold has been shown to

be very high. In patients whose clinical condition had not changed upon retesting, the correlation coefficient was 0.96. When there had been significant clinical improvement the threshold decreased(8). The effect of previous sedative intake on the threshold was studied previously; it was found that the average threshold of patients receiving no sedation for 48 hours preceding the test was the same as that of patients who received regular psychiatric doses of sedatives(3).

RESULTS

Table 1 shows the means and standard deviations of the sedation thresholds for the various diagnostic groups. It also shows the percentage of cases in each diagnostic category with thresholds of 4 mgm./Kg. or more. The statistical significance of the difference between the means of all groups was determined. Excluding the unclassified group, 210 comparisons between means were possible. Of these 210, 114 were found to be significant at the 1% level of confidence, and 23 at the 5% level of confidence. All subsequent statements about differences between groups are based on statistically significant findings.

Sex and age.—There was no significant difference between the sedation thresholds of male and female subjects. As regards age, there was a small, but statistically significant, tendency for the sedation threshold to diminish with increasing age, the correlation coefficient being—0.30. Further analysis of the data indicated that this negative correlation with age resulted from the fact that the patients with psychotic depression and organic psychosis, two groups with low sedation thresholds, were also the oldest. When these two groups were removed from the main body of data, the correlation between the sedation threshold and age for the remaining patients was virtually zero. Furthermore, the correlations between the sedation threshold and age within the psychotic depression and organic psychosis groups themselves were not statistically significant. It therefore seems reasonable to assume that age in itself probably did not significantly influence the sedation threshold, but that the negative correlation was due to the age distribution of the various diagnoses. In previous studies(2, 9)

certain groups differed considerably in both average age and sedation threshold. It was possible to compare the thresholds of age-matched groups of patients with neurotic and psychotic depression, and psychotic depression and organic psychosis, and to show that their different sedation thresholds were not a result of age differences.

Psychoneuroses.—The data in Table 1 show that the lowest sedation thresholds were found in patients with conversion hysteria and hysterical personality. The highest thresholds occurred in patients with anxiety states and neurotic depressions. These results are essentially the same as reported previously for a smaller sample(3). The progressively greater incidence of higher thresholds as one proceeds from hysteria to the anxiety states is shown in Fig. 1. If one regards anxiety state as the neurosis involving the greatest degree of manifest anxiety, and hysteria as the neurosis involving the least degree of manifest anxiety, the data support the conclusion that the sedation threshold is correlated with degree of manifest anxiety.

It may be noted, however, that the data agree equally well with the conclusion that the sedation threshold is correlated with degree of obsessiveness. If one postulates the

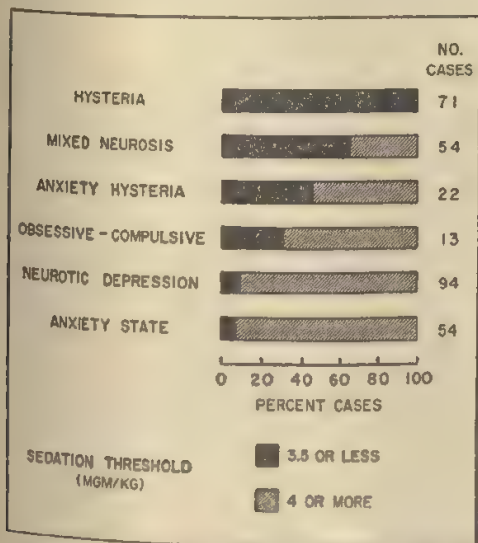


FIG. 1.—Relative proportions of sedation thresholds above 3.5 and below 4 mgm./Kg. in various psychoneurotic groups. Hysteria includes conversion hysteria and hysterical personality.

existence of a continuum of neurotic personality traits, ranging from the hysteric at one end to the obsessional at the other, and considers that the personalities of patients with anxiety states and neurotic depressions were mainly obsessional, it is clear that the sedation threshold is closely related to this continuum. Such a continuum for the psychoneuroses is related to Eysenck's introversion-extraversion dimension of personality(10). According to Eysenck's theory of reactive inhibition(11) one should find lower sedation thresholds in hysterics than in normals. This prediction was borne out by the present data. The mean threshold of the control group was significantly higher than the mean of the hysteric group.

Psychoses.—It seemed possible to divide the sedation thresholds in psychotic disorders into 3 ranges, each with a diagnostic meaning of its own. The distributions of the thresholds divided in this way are shown in Fig. 2. The lowest range is occupied by the organic psychoses. This group of patients had significantly lower thresholds than any other group. The findings in organic psychosis may be related to those of Weinstein and his co-workers(12). They showed that disorientation and denial of illness were easily produced by sodium amytal in such patients, and that this low tolerance to amytal could be taken as a sign of organic brain damage.

The middle distribution of Fig. 2, labelled acute psychotic disorders, was derived from the data of patients with psychotic depressions, acute schizophrenias, schizo-affective states, paranoid states and manic states. The

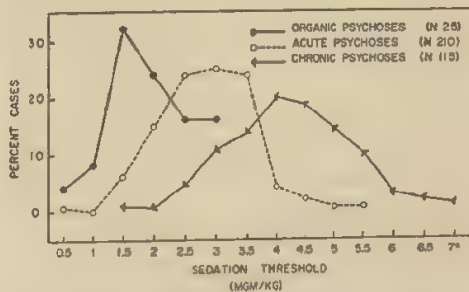


FIG. 2.—Percentage distributions of sedation thresholds in psychotic patients. Acute psychoses include: depression, paranoid, manic and hypomanic, schizo-affective, and acute schizophrenic states. Chronic psychoses include chronic and borderline schizophrenic disorders.

mean threshold in all of these groups with the exception of manic states was in the low range, comparable to that of patients with hysteria. The findings in manic and hypomanic states are still too variable, and too few cases have so far been studied, to allow any clear statement about the expected findings in this group. The thresholds in the remaining groups of acute psychoses were consistently low. On the other hand, the distribution of thresholds for the chronic schizophrenic and borderline schizophrenic groups in Fig. 2. shows that these patients tended to have high thresholds. The group of simple schizophrenias was different from the other chronic schizophrenics in this respect; their thresholds were uniformly low. The thresholds in the group of borderline schizophrenias were significantly higher than those of the chronic schizophrenias.

It is quite clear that there was a marked difference between the sedation thresholds in acute and chronic psychoses. The relationship between the sedation threshold and duration of psychotic symptoms in patients with schizophrenic and paranoid disorders is shown in Fig. 3. This graph shows the percentage of cases with thresholds of 4 mgm./Kg. or more with respect to duration of psychotic symptoms at time of testing. The data do not include the borderline schizo-

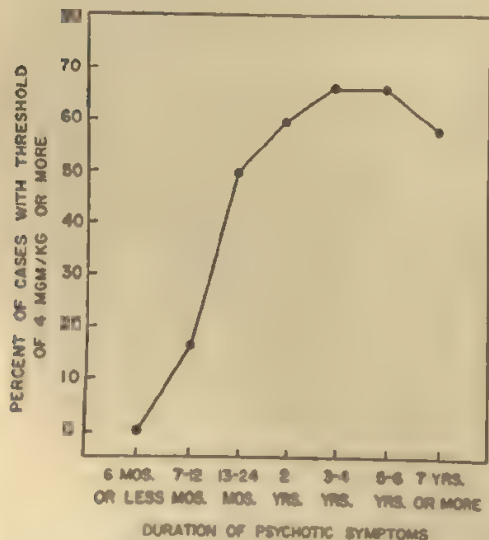


FIG. 3.—Percentage of cases with above average sedation thresholds (4 mgm./Kg. or more) with respect to duration of psychotic symptoms.

phrenics, because of difficulties in assessing exact duration of symptoms in this group. They also exclude two groups which required special definition. One of these two groups may be called "acute on chronic"; it consisted of 23 patients who had acute episodes of psychotic symptoms occurring on a background of chronic symptomatology. The other group, "acute recurrent," contained cases in which an acute episode had occurred for at least a second time, with apparent normal behavior between this episode and a preceding one, which had ended at least one year previously. In both of these groups, the "acute on chronic" and "acute recurrent," the sedation thresholds resembled those of patients with symptoms of one year or less duration, that is of acute schizophrenia. Figure 3 shows that the proportion of high thresholds rose considerably after symptoms had been present for one year, and then tended to remain steady. The critical nature of the one year period with respect to the sedation threshold is noteworthy, if one recalls the significance of the one year duration of illness in statistics dealing with the efficacy of such treatments as insulin coma (13).

Differential diagnosis of depression.—The sedation thresholds of patients with psychotic depression were nearly uniformly low while those of patients with neurotic depression were nearly uniformly high. The distributions of thresholds for these two groups are shown in Fig. 4. The psychotic depression group does not include 12 patients who had received some electroconvulsive therapy (ECT) prior to testing. These were excluded because ECT tends to raise the thresh-

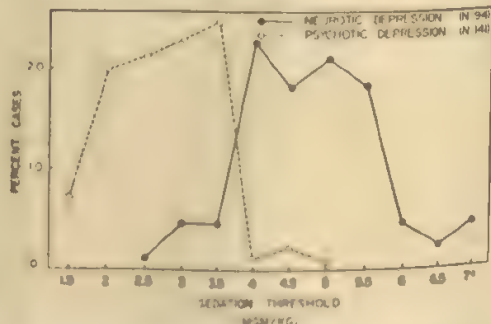


FIG. 4.—Percentage distributions of sedation thresholds of patients with neurotic and psychotic depression.

old(9). It is clear that the neurotic and psychotic depression groups constituted two separate populations with respect to the sedation threshold. This differentiation is perhaps the most clinically useful one provided by the sedation threshold. The test has become almost routinely used for differential diagnosis of depression at the Allan Memorial Institute, as this differentiation is often difficult to make except after a lengthy period of observation.

Relationship between sedation threshold and outcome of ECT.—The differentiation between neurotic and psychotic depression would lead one to expect the sedation threshold to predict therapeutic outcome with ECT. That it does so has previously been demonstrated in the depressive groups(9). It was a matter of some interest to determine whether the sedation threshold predicted outcome with ECT in all types of patients. The case histories of all of the 750 patients who had received 4 or more treatments were reviewed and degree of short-time improvement assessed. "Short-term" refers to the patient's status at time of discharge; we had no follow-up data. Patients who had received ECT in conjunction with insulin coma therapy were not included. Degree of improvement could not be elicited from the clinical records in 20 cases, and these were excluded. This left 292 cases. Degree of short-term improvement was classified into 3 categories: marked, which amounted to remission of symptoms; moderate, where there was considerable relief of symptoms, but the degree of remission was qualified in the clinician's statement; slight or none, where little improvement was judged to have occurred. In applying these criteria, it seemed possible that other workers might disagree as to whether a particular case was markedly or moderately improved, but that there would be very little disagreement concerning the distinction between slight or no improvement and moderate improvement. The data relating the sedation threshold to degree of clinical improvement with ECT are shown in Fig. 5. The graph shows that, as the sedation threshold increased, the chance that a given patient would benefit from ECT diminished. There appeared to be a critical point between 3.5 and 4 mgm./Kg., which is also the critical

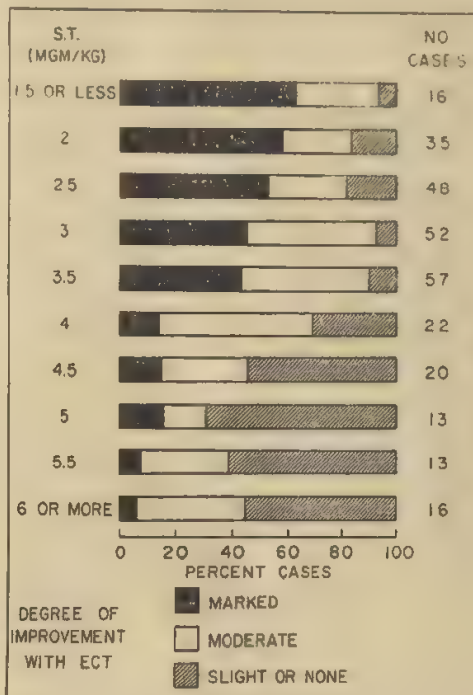


FIG. 5.—Quality of short-term improvement with ECT, as a function of the pretreatment sedation threshold.

point in distinguishing neurotic from psychotic depression.

DISCUSSION

Present data confirm and extend the previously reported relationships between the sedation threshold and certain psychological variables, which are of psychiatric interest. The most important of these relationships have been formulated as: 1. a positive correlation with degree of manifest anxiety; 2. a negative correlation with degree of impairment of ego functioning, in the sense of contact with reality(2, 3, 4). As degree of manifest anxiety increases, the threshold increases; as degree of ego function impairment increases, the threshold decreases. Neurophysiological implications of the sedation threshold findings in the light of these relationships have been discussed elsewhere(2, 4, 14), with emphasis upon the possible role of the adrenergic component of the reticular formation in mediation of anxiety(15).

In psychoneurotic patients, the sedation

threshold was found to be correlated with relative predominance of hysterical or obsessional personality traits, as well as with degree of manifest anxiety. Studies in progress in this laboratory have so far substantiated the existence of a relationship between the threshold and a dimension of personality similar to Eysenck's introversion-extraversion (10). These two correlates of the threshold, degree of anxiety and personality trend, as well as the fact that high thresholds decrease with reduction of anxiety, may be integrated, if one makes two assumptions. One is that there is more than one neurophysiological mechanism mediating anxiety, as it is clinically recognized. The other is that the mechanism of anxiety in any individual is linked with personality factors. Granted these assumptions, it may be stated that the sedation threshold reflects the degree of activity of that neurophysiological mechanism of anxiety which predominates in obsessional personalities (8). Recent data of Weil-Malherbe suggest that patients classed as hysterics and psychopaths differ from those classed as obsessionals and anxiety states with respect to plasma-adrenaline concentration, the concentration being lower in the former (16). This finding is in accord with the postulated role of the adrenergic component of the reticular formation in mediation of anxiety, and with the evidence linking obsessiveness with the type of anxiety measured by the sedation threshold.

The data of this study suggest the following diagnostic applications of the sedation threshold:

1. To measure degree of manifest anxiety in non-psychotic individuals.
2. To differentiate between hysterical and obsessional personality trends and between hysteria and anxiety.
3. A very low threshold may provide confirmatory evidence for the presence of organic psychosis.
4. To obtain some indication of the possible duration of psychotic symptoms in schizophrenic patients for whom an accurate history is unavailable. Chronic cases, except for the simple subtype, will usually have high thresholds.
5. To differentiate between neurotic and psychotic depressions; thresholds are gener-

ally high in the former and low in the latter.

6. To predict therapeutic outcome with ECT. In general, the lower the threshold, the better the prognosis with this therapy.

The relationship between the sedation threshold and therapeutic outcome with ECT suggests a parallel with Funkenstein's test of autonomic function (17), which has also been reported to predict prognosis with ECT. However, as yet unpublished data, obtained in collaboration with Dr. R. B. Sloane, revealed no correlation between the sedation threshold and all possible measured aspects of the blood pressure response to Mecholyl in a group of 30 patients. This lack of correlation indicates that the sedation threshold and Funkenstein's test measure unrelated phenomena.

It should be emphasized that the sedation threshold must be applied within the context of other clinical information. Like most laboratory procedures, it is influenced by and related to a variety of factors and does not mean much as an isolated datum. This relative lack of specificity does not detract too much from its usefulness as an aid to differential diagnosis. In this respect it may be considered analogous to such tests as the erythrocyte sedimentation rate, which are also non-specific and must be interpreted in relation to the total clinical picture. Given this qualification, it may nevertheless be stated that experience with the sedation threshold in a clinical setting has led us to review our clinical formulation whenever it disagreed markedly with test findings. In such instances, the impression was that, more often than not, subsequent events showed the clinical opinion to have been based upon insufficient data.

The large number of statistically significant differences between the mean sedation thresholds of patients with different psychiatric diagnoses is of some interest, because of the current and long-standing dissatisfaction with classical psychiatric nosology. Present findings do not necessarily validate the nosological categories used in this study, but they do suggest that the clinical distinctions, upon which these categories are based, probably reflect basic neurophysiological differences.

SUMMARY

The sedation threshold is a determination of the amount of intravenous sodium amytal required to produce certain EEG and speech changes. This paper presents data showing the relationship between the threshold and psychiatric diagnosis in 750 consecutively tested patients. There were also 45 nonpatient control subjects. A large number of statistically significant differences between the thresholds of various diagnostic groups was demonstrated. These differences suggested the use of the threshold for several diagnostic problems, which included: a. measuring degree of manifest anxiety; b. differentiating between hysterical and obsessional personality trends; c. confirming presence of organic psychosis; d. differentiating acute from chronic schizophrenia; e. differentiating neurotic from psychotic depression; f. predicting therapeutic outcome with ECT. It was emphasized that, for clinical purposes, the threshold should be applied within the context of the total clinical picture.

BIBLIOGRAPHY

1. Shagass, C.: EEG Clin. Neurophysiol., 6: 221, May, 1954.
2. Shagass, C., and Naiman, J.: A.M.A. Arch. Neurol. Psychiat., 74: 397, Oct. 1955.
3. Shagass, C., and Naiman, J.: J. Psychosom. Res., 1: 49, Feb. 1956.
4. Shagass, C.: Psychosom. Med., 18: 410, Sept. Oct. 1956.
5. Davis, J. F.: Instrument Soc. Am. Meeting of Sept. 1956, Paper No. 56-24-1.
6. Hoch, P., and Polatin, P.: Psychiat. Quart., 23: 248, April, 1949.
7. Shagass, C., and Jones, A. L.: Quart. J. Stud. Alc., 18: 171, June, 1957.
8. Shagass, C., Mihalik, J., and Jones, A. L.: J. Psychosom. Res., 2: 45, Feb. 1957.
9. Shagass, C., Naiman, J., and Mihalik, J.: A.M.A. Arch. Neurol. Psychiat., 75: 461, May, 1956.
10. Eysenck, H. J.: Dimensions of Personality. London: Routledge, 1957.
11. Eysenck, H. J.: J. Ment. Sci., 101: 28, Jan. 1955.
12. Weinstein, E. A., Kahn, R. L., Sugarman, L. A., and Linn, L.: Am. J. Psychiat., 109: 889, June, 1953.
13. Alexander, L.: Treatment of Mental Disorder, Philadelphia: Saunders, 1953.
14. Shagass, C.: EEG Clin. Neurophysiol., 9: 107, Feb. 1957.
15. Rothballer, A. B.: EEG Clin. Neurophysiol., 8: 603, Nov. 1956.
16. Weil-Malherbe, H.: J. Ment. Sci., 101: 733, Oct. 1955.
17. Funkenstein, D. H., Greenblatt, M., and Solomon, H. C.: Psychosom. Med., 14: 347, Sept.-Oct., 1952.

DISCUSSION

EDWARD N. HINKO, M.D. (Cleveland, Ohio).—After reading the authors' manuscript, it became immediately apparent that it would be impossible for Dr. Shagass to present in 20 minutes all of the pertinent information he has so diligently gathered and evaluated during the past 5 years on the use of the sedation threshold.

The statement is made that differences between groups are based on a high level of statistical significance. It would have been appropriate to indicate what probability values they considered significant.

Age appears to be a significant factor as seen in the 62.5 median age for the organic psychoses—this group having the lowest mean sedation threshold, 1.94. The data presented would have been more significant if the mean and the standard deviations for age had been provided. It would be interesting to see what changes in statistical results would occur if the authors made adjustments for age and diagnosis.

Standard deviation for sedation thresholds in almost all groups is quite large indicating considerable variation within diagnostic categories which decreases the usefulness of the sedation threshold as a neurophysiological test for psychiatric diagnosis.

The authors have established that the thresholds in psychotic depressions were nearly uniformly low, while those in neurotic depressions were nearly uniformly high, and stated that the test has become an almost routine test for the classification of depression at the Allen Memorial Institute. We would assume that it played no part in establishing the diagnosis of cases reported in this study.

The method used in rating anxiety is not entirely clear. Was it primarily a subjective one? It would appear that objective methods correlating with physiological measures, such as the psychogalvanic skin response, determinations of blood pressure, pulse and respiratory rate, would be more meaningful.

A series of 15 patients with thyrotoxicosis were studied and found to have a relatively high mean sedation threshold, 4.17. Did sedation thresholds in this group change when thyroid function returned to normal?

Assuming that the sedation threshold decreases when thyroid function returns to normal, we would be inclined to hypothesize that the sedation threshold may be an important factor in measuring brain metabolism.

Simultaneous studies of changes in the cerebral arterial and venous blood, and the effect of such drugs as Methedrine on the sedation thresholds of a group of psychotic depressed patients who are reported as having low sedation thresholds, may provide significant correlations. This would suggest comparable studies of patients with high sedation thresholds attempting to determine the effect on the sedation threshold of such drugs as chlorpromazine. Of further value would be the restudying of patients, investigating the effects of electro-

convulsive therapy and psychotherapy on the sedation threshold.

The studies which Shagass has reported have been worthwhile and deserve to be continued and refined. They appear to have potential value in the development of objective instruments which, appropriately utilized, will provide physiological data that can be integrated with biological and psychological data, and make it possible not only to predict what pathology will develop, but also under what conditions.

THE EFFECT OF TRANQUILIZING DRUGS ON ENZYME SYSTEMS^{1, 2}

JACKSON A. SMITH, M.D.,³ MICHAEL J. CARVER, PH.D.,³ AND ELEANOR W. HELPER, M.S.⁴

In an effort to clarify the mode of action of the ataraxics (tranquilizers) and chemically related compounds, 12 were tested for their effects on an enzyme system. The rationale of this study was the hypothesis that biochemical activity can be interpreted in terms of enzymatic phenomena and that the ataraxics may influence the activity of enzyme systems.

Enzymes, being proteins and functioning as organic catalysts, are affected by such factors as heat, the acidity of the medium and the availability of their substrate; the majority also require the presence of a coenzyme or a metal or both to be active. A substance altering any of these factors may consequently affect the activity of the system.

Since most enzymes are not completely specific but activate related compounds, they may be competitively interfered with or inhibited by similar substances. There are several types of inhibition, a discussion of which is beyond the intent of this paper except to point out instances in which certain drugs are known to act as enzyme inhibitors, such as acetazoleamide (or Diamox) which reversibly inhibits carbonic anhydrase, disulfiram which inhibits the enzyme which oxidizes acetaldehyde and those drugs which inhibit acetylcholine-sterase.

A previous study reported that serum succinic acid and pyruvic acid were moderately increased in a normal subject after LSD₂₅ administration, but were markedly increased under the same conditions in a schizophrenic (3). Two reports indicate the phenothiazine compounds inhibit glucose oxidation (4, 6)

and another (17) revealed an abnormal glycolytic process in the erythrocytes of schizophrenics.

Several animal studies have shown a hyperglycemic response to chlorpromazine in mice and hamsters (22, 23, 27) and others (8, 14) report a tendency to hyperglycemia in humans or an alteration (12) in glucose tolerance with a prolonged delay in return of the blood sugar levels to normal. Therefore, it seemed pertinent to initiate this project with an evaluation of several tranquilizers on an enzyme system essential to the metabolism of glucose.

In 1942, H. Bruce Collier and Della E. Allen (11), attempting to explain the antihelminthic activity of phenothiazine, reported on the inhibition of catalase, cytochrome oxidase, and succinic dehydrogenase by the oxidation products of phenothiazine. Collier, *et al.* (12), in 1952 reported on the lack of inhibition of succinoxidase activity in rat liver mitochondria by phenothiazine derivatives. The following year Abood and Gerard (2) (1953) found that compounds containing the diphenyl nucleus inhibited the activity of cytochrome oxidase of rat heart mitochondria from 30-50%. Other studies this same year (1953) reported that chlorpromazine caused a depression of oxygen consumption in slices of cortex from the guinea pig (13), the rat (24), and whole brain homogenates (16).

Finkelstein (15), *et al.* (1954), found that the concentration of chlorpromazine necessary to depress respiration of brain tissue *in vitro* was not of the same order as the amounts required to evoke a pharmacological response. This was on the assumption of a generalized equal distribution of the chlorpromazine; it was later shown that this product is more concentrated in specific anatomical areas. In 1955 there were several reports of the effects of chlorpromazine on enzyme systems, one showing that this compound caused uncoupling of oxidative phosphorylation of brain mitochondria using pyruvate as

¹ Read at the 113th annual meeting of The American Psychiatric Association, Chicago, Ill., May 13-17, 1957.

² From the departments of Biochemistry and Psychiatry, University of Nebraska College of Medicine. This study supported by Nebraska Board of Control Fund for Psychiatric Research.

³ Director of Research, and Assistant Professor of Biochemistry, Research Biochemist, Nebraska Psychiatric Institute, Omaha, Neb.

⁴ Assistant Chemist.

a substrate, and that a 50% inhibition of cytochrome oxidase occurred (Abood(1)), and another report found that in animals given chlorpromazine and sacrificed, the pyruvate oxidation and sulfanilamide acetylation were unchanged at 5 times the physiological dose, but that adenosinetriphosphatase was increased in all areas of the brain, and that the greatest increase was in the thalamic-hypothalamic area(19). During this same year other studies reported on the effects of bisphenolic compounds on succinoxidase, cytochrome c oxidase, and lactic dehydrogenase of animal tissue(18); and the influence of increased temperature on the pharmacological properties of chlorpromazine in animals (the symptoms of excitation being more marked with increased temperature(7)).

Finally, during the past year (1956), there were two papers on phosphatide labeling in brain slices(20) and on phospholipid turnover in brain(28), as well as further studies on the effects of chlorpromazine and reserpine on cytochrome oxidase and adenosinetriphosphatase(5, 9).

The previous reports that chlorpromazine did not effect the metabolism of glucose to pyruvate and the evidence that it did interfere with glucose metabolism led to this study of the effects of the ataraxics on the succinoxidase system.

METHOD

The tissue was prepared by homogenizing rat brain and rat liver in isotonic sucrose in a Waring blender.

For those not completely familiar with the Warburg technique, the manometric method of Schneider and Potter for the succinoxidase system(26), used in this study will be briefly described. A "U" shaped manometer, one arm of which is open and therefore subject to atmospheric pressure, and the other arm closed, is utilized. The measurements recorded are a reflection of alterations of pressure in the closed system. The changes in pressure are shown by a varying level of the closed column and are in turn converted to a volume reading by a constant. During the experiment the manometer is attached to a shaking mechanism to insure that the rate of diffusion of oxygen into the liquid is not limiting the reaction.

Attached to the closed arm of the system is a reaction vessel with a "side arm" attachment which allows its contents to be mixed with the homogenate. When the reaction vessel and its contents have been equilibrated in a constant temperature water bath, the contents of the "side arm" are tipped into the cup, and readings are made subsequently at 5-minute intervals for one-half hour.

The rise in the level of the fluid in the closed arm of the system reflects the rate of oxygen uptake by the preparation, the converted readings are recorded as a graph (with time plotted against the rate of oxygen uptake). The graph levels out with time as the rate of oxygen uptake decreases with the exhaustion of the substrate, the accumulation of end products (which are either toxic to the enzyme or compete for the remaining substrate), or as the enzyme is denatured (by mechanical agitation or heavy metal ions).

In this study, oxygen uptake rates were determined for a control and with the drug added at several concentrations; each determination being an average from at least 3 different reaction vessels. The relative rate of oxygen uptake was found by expressing control as 100 and rates for various drug concentrations as a percentage of this control reading. The inhibitor was added to the main compartment along with the enzymes and co-factors and incubated for 20 minutes prior to the addition of the substrate which is tipped in from the sidearm.

An assay of the succinoxidase system measures overall absorption of all enzymes concerned, from the removal of 2 hydrogen atoms from succinate, to the final combination of 2 hydrogen atoms with oxygen to form water. The concentration of the various drugs was varied to produce an inhibition ranging from 0 to approximately 80% of the control. The 50% inhibiting dose (ID_{50}) was read graphically: this measure was found to be reproducible from one tissue preparation to another.

DRUGS USED

1. Compounds containing the phenothiazine group:

a. Chlorpromazine—10-(3-dimethylamino-n-propyl)-2-chlorophenothiazine HCl

b. Promazine—10-(3-dimethylamino-n-propyl) phenothiazine HCl

c. Compazine—2 chloro-10 (3(1-methyl-4-piperazinyl-n-propyl) phenothiazine dimaleate

d. Phenergan—10(3-dimethylamino-isopropyl) phenothiazine HCl

e. Wy 1107—10(3-gamma diethylaminan-propyl) phenothiazine HCl

f. Wy 1137—10(3 pyrrolidyl-n-propyl) phenothiazine HCl

2. Compounds *not* containing the phenothiazine group:

a. Frenquel—alpha (4-piperidyl) benzhydrol HCl

b. Meratran—alpha (2-piperidyl) benzhydrol HCl

c. Mer 22—1,2 diphenyl-1-(4-piperidyl) ethanol

d. Mer 16 alpha, alpha diphenyl-1 methyl-2 piperidinethanol HCl

e. Reserpine

f. Quiactin—2 ethyl-3-propyl glycidamide

RESULTS

The ID_{50} (concentration of drug required to cause a 50% inhibition of the enzyme system from rat liver) of the phenothiazine series varied between 0.3×10^{-8} M and 0.7×10^{-8} M. They were decreasingly effective in the following order: compazine, chlorpromazine, Wy 1137, Wy 1107, promazine and phenergan.

Quiactin was without effect on the system, while reserpine had an ID_{50} at 0.81×10^{-8} M. The other 4 agents investigated in order of decreasing effectiveness were Meratran, Frenquel, Mer 22 and Mer 16. ID for these compounds varied from 3×10^{-8} M to 5×10^{-8} M.

Preliminary results indicate a decreased effectiveness of the compounds containing the phenothiazine group on rat brain succinoxidase system, since the inhibition obtained was only approximately half that of the liver enzyme system at the same drug concentration.

Welch and Bueding(29) have suggested that before the action of a drug is attributed to its effect on an enzyme system, the following criteria should be met: 1. the concentration necessary to produce an effect should

TABLE I

SENSITIVITY OF LIVER SUCCINOXIDASE SYSTEM AND COMPONENT PARTS

Results are expressed as ID_{50} or the millimolar concentration necessary to produce 50% inhibition when compared to control without drug.

Drug	ID_{50}
Quiactin	(6)
Meratran	5.6
Frenquel	4.5
Mer 16	3.6
Mer 22	3.5
Reserpine	1.0*
Phenergan	0.68
Promazine	0.61
Wy 1107	0.51
Wy 1137	0.47
Chlorpromazine	0.35
Compazine	0.27

* Theoretical ID_{50} obtained by extrapolation. Reaction mixture is saturated with reserpine at concentrations slightly greater than 0.5 Mm.

be comparable pharmacologically and in vitro, 2. if the drug shows a pharmacological predilection for a particular tissue this affinity should be equally pronounced in vitro, 3. finally, there should be a demonstrable similarity in the effects of structurally related compounds in vivo and in vitro.

In this work only the last requirement appears to have been met since the ability to inhibit the succinoxidase system was of the same order among the compounds containing the phenothiazine group.

Therefore, from this study, as performed, and on the basis of the above criteria, it would seem unlikely that the principle clinical effects of the compounds tested result from inhibition of this particular enzyme system.

BIBLIOGRAPHY

1. Abood, L. G.: Proc. Soc. Exp. Biol. & Med., 88: 688, 1955.
2. Abood, L. G., and Gerard, R. W.: J. Pharmacol. & Exp. Therapeutics, 108: 261, 1953.
3. Arnold, O. H., and Hofmann, G.: Wien. Zschr. Nervenhr., 10: 92, 1955.
4. Balestieri, A., and Berti, T.: Boll. Soc. Ital. Biol. Sper., 29: 1669, 1954.
5. Bernsohn, J., Namajuska, J., and Boshes, B.: J. Neurochem., 1: 145, Dec. 1956.
6. Berti, T., and Balestieri, A.: Boll. Soc. Ital. Biol. Sper., 29: 632, 1953.
7. Berti, T., and Cima, L.: Arzneimihel-Forsch., 5: 73, 1955.

8. Celice, J., Forcher, P., and Plas, F.: *Therapie*, 10: 30, 1955.
9. Century, B., and Horwitt, M. K.: *Proc. Soc. Exp. Biol. N. Y.*, 91: 493, 1956.
10. Charatan, F. B. E., and Bartlett, N. G.: *J. Ment. Sc.*, 101: 351, 1955.
11. Collier, Bruce, and Allen, Della E.: *Can. J. of Res.*, 12: 284, Dec. 1942.
12. Collier, H. B., and Allenby, G. M.: *Can. J. Med. Sci.*, 30: 443, 1952.
13. Courvoisier, S., Fournel, J., Ducrot, R., Folshy, N., and Koetschet, J.: *Arch. Internat. Pharmacodyn.*, 92: 305, 1953.
14. Dobkin, A. B., Lamoureux, L., Letienne, R., and Gilbert, R. G. B.: *Can. M. A. J.*, 70: 6, 626, June 1954.
15. Finkelstein, M., Spencer, W. A., and Ridgeway, E. R.: *Proc. Soc. Exp. Biol. Med.*, 87: 343, 1954.
16. Ganshirt, H., and Brilmayer, H.: *Arch. Internat. Pharmacodyn. Et. De Therapie*, 98: 467, 1954.
17. Gerard, Ralph W.: *Illustrative Strategies for Research on Psychopathology in Mental Health. Symposium 2*, 1956.
18. Gould, B. S., Frigerio, N. A., and Lebowty, W. B.: *Arch. Biochem. and Biophys.*, 56: 476, 1955.
19. Grenell, R. G., Mendelson, J., and McElroy, W. D.: *Arch. Neurol. & Psychiat.*, 73: 347, 1955.
20. Helper, E. W., and Dallam, R. D.: *Personal Communication to be published (1956)*.
21. Magee, W. L., Berry, J. F., and Rossiter, R. J.: *Biochem. et Biophys. Acta*, 21: 408, 1956.
22. Norman, D., and Hiestand, W. A.: *Anat. Rec.*, 122: 461, 1955.
23. Norman, D., and Hiestand, W. A.: *Proc. Soc.*, 90: 89, 1955.
24. Peruzzo, L., and Fornie, R. B.: *Presse Med.*, 61: 1463, Nov. 1953.
25. Robie, W. A.: *Methods in Medical Research*, 1: 307, 1948.
26. Schneider, W. C., and Potter, V. R.: *J. Biol. Chem.*, 149: 217, 1943.
27. Smith, Kline & French Laboratories. *Thorazine, A Review of the Pharmacology Covering Material Published up to Approximately May 1956; Revised Aug. 1956*.
28. Wase, A. W., Christensen, J., and Polley, E.: *Fed. Proc.*, 15: 496, 1956.
29. Welch, A. D., and Bueding, E.: *Biochemical Aspects of Pharmacology, in Currents in Biochemical Research*, Ed.: Green, D. E., New York: Interscience Publishers, 1946.

INSULIN COMA IN DECLINE

HAROLD BOURNE, M.B., B.S., D. P. M.¹

In 1958, the insulin treatment of schizophrenia reaches its quarter century. Twenty-fifth anniversaries in therapeutics are usually unruffled—by then, remedies are discarded and forgotten or else accorded some uncontested place, at the very least. If it is otherwise with insulin coma, it is odder still that at its twentieth year it seemed secure and established—the most important therapy for the most important mental disease.

So it might have appeared in 1953, two full decades after its introduction (20). It had met with few adverse reports, and these had been swamped in an enthusiastic deluge; it was recommended unequivocally in the foremost text books of psychiatry in the major languages, with one notable, though hesitating, exception (11); and a generation of psychiatrists had grown up who, in the main, were seldom even aware any longer that its value might be seriously disputable. Although disquietingly negative findings had occasionally come from a few reputable workers, not a single comprehensive review really to challenge it existed until that year, when I sought to fill the gap in a paper entitled "The Insulin Myth." The present essay is to point out the signs of a growing turn of the tide away from insulin now and in so doing, to hasten the exit of an irrational and hazardous therapy.

For the purpose of my critique in 1953, an exhaustive search through the world literature could scarcely produce a dozen published papers that in any way questioned the efficacy of insulin coma, and these dated chiefly from the 1930s and early 1940s. Yet in the period from 1936 to 1946 alone, there were over 700 references to the subject that Bellak (2) could list. "The Insulin Myth" therefore was composed of an exposition of the pitfalls and difficulties inevitable in assessing treatments of whatever kind for schizophrenia; a sceptical analysis, in the light of this, of certain of the innumerable reports favourable to insulin, chosen from

the most influential, careful, and typical ones; and an account of relevant personal experience, and of some of the rare dissenting studies. Actually of the latter, 5 had to be omitted (4, 14, 16, 18, 21).

While this criticism of insulin was received as a passing heresy, with a rather heated correspondence in the *Lancet* in the ensuing 3 months, other workers coincidentally expressed similar doubts (10, 17). Now in the few years since, a distinct change is becoming recognisable in current attitudes to insulin, both those expressed in the journals, and those disclosed in the day to day practice of mental hospitals. Apart from there having been in this brief time more published studies controverting its value than in all the preceding 20 years, it is also clear that many centres (*e.g.* 3, 9) have been content, with the arrival of chlorpromazine and reserpine, to allow the insulin coma ritual to fall quietly into desuetude. In fact Boardman, *et al.* (5) demonstrated that in two parallel series each of 50 schizophrenics, there was no difference in outcome between those treated with insulin coma and those with chlorpromazine.

Actually, at least 10 further papers (1, 5, 6, 10, 12, 13, 15, 17, 22, 24) can be listed that explicitly bring the usefulness of insulin into question, and there are others (*e.g.* 19, 23) implicitly doing so. Since some contribute novel approaches both to this problem and to that of evaluating psychiatric methods in general, they require fuller mention here.

The first of these, by Hoenig *et al.* (12), is a disturbingly simple investigation. Their point of departure was the commonplace observation that the results of treatment of schizophrenia in 1948-50 far surpassed those in 1935 with seemingly comparable patients at the same hospital, before insulin coma was introduced. However, unlike many of their predecessors who made similar observations and took them as proof of the effects of insulin therapy, they analysed these differences with a view to discovering to what they might be attributed. It then transpired that

¹ Lecturer in Psychiatry, University of Otago, Dunedin, New Zealand.

there were other factors than physical treatments responsible, since an equal improvement in the later generation at this hospital was to be found in other schizophrenics who went untreated by physical methods as well as in those receiving insulin. In a further investigation of these lines (13), in which the longer term prognosis was considered, there was still no certain indication of any special benefit conferred by insulin treatment.

A related discovery was made by Staudt and Zubin (22) during an immense survey of results described with somatherapies in schizophrenia. It was unearthed in a graphic analysis of the multitude of "controlled" studies in which a treated series is compared with an untreated one. Examining the untreated cases in such reports, they detected an extraordinary tendency for their outcome to be worse than that obtained with "non-specific" therapies in the days before the shock era. In short, the controls in these studies mostly turn out to consist of schizophrenics whose prognosis is singularly bad.

Perhaps the most important development in the field has been the achievement by Ackner, *et al.* (1) of the first controlled trial of insulin coma that is unimpeachable. So ingeniously and elaborately was this organized, that neither patients nor psychiatric assessors knew which individual had been submitted to insulin coma, and which to barbiturate comas devised so as exactly to simulate the standard insulin routine from start to finish. Patients with recent onset of psychosis were selected to be in matched pairs, and randomly distributed between the insulin and the barbiturate régimes. The results in the two groups turned out to be identical and insulin, as such, could be seen to have no advantage over barbiturate.

In a somewhat similar experiment, Boling, *et al.* (6) also introduce independent assessors to the study of insulin therapy. Alternate cases in a series of 73 schizophrenics were given either deep insulin comas or light treatments with insulin in doses only sufficient to produce disorientation. The results were the same with both methods.

CONCLUSION

Recent trends in the psychiatric literature reveal that disillusion with the insulin coma

treatment of schizophrenia has steadily spread in the past 4 years. Since the method has no rationale, and since even its empirical basis now cannot withstand critical inspection, it is of interest to know why it gained almost unanimous acceptance.

Probably three circumstances are at the bottom of it. The first is that a movement for the reform of mental hospitals and for their conversion from inactively custodial asylums to therapeutic centres, was bound to grow in the last 20 years. The second is that such a movement would inevitably have promoted treatment methods that involved optimistic and individual attention to psychotic persons. The third is that in the early 'thirties when all this began, schizophrenics were considered inherently inaccessible to psychotherapy, since Freud adumbrated that they were incapable of forming a transference relationship.

It can safely be said, now that this fallacy has been exploded in the last decade, that were insulin coma a new treatment invented in 1958, it would have no hope of catching on in the way it did. It succeeded because it provided a personal approach to the schizophrenic, suitably disguised as a physical treatment so as to slip past the prejudices of the age. The work of Whitehorn and Betz (24) underlines this point most lucidly. Comparing two groups of psychiatrists, the one psychotherapeutically effective with schizophrenics, and the other ineffective, they found that only the results of the latter were enhanced by insulin coma therapy.

In short, insulin coma treatment may come to be remembered as the first application of psychological healing for schizophrenics in the mass, and its achievement as an inadvertent one—the supply to persons hitherto considered impervious to it, of daily, devoted, personal care.

In 1958, there are more rational ways of doing this, but apart from its irrationality, the insulin treatment exposes both patient and psychiatrist to a number of hazards which are no longer justified. It has a mortality which is not negligible; it is extravagant in the scarcest of mental hospital commodities, namely medical and nursing time; and worst of all, it effectively screens doctor

and patient from other approaches to the problems of schizophrenia.

The psychiatrist in training probably suffers most damage. Juniors are often posted to the insulin unit so that, at its foundations, their knowledge of schizophrenia requires no preoccupation with its subtle psychology and no experience of psychotherapy. Even the proper use of ECT is impeded because it is learnt as a casual procedure, administered sporadically and without system, as an adjuvant to the insulin ritual. One consequence of this is that the phenomena of convulsion dependence (8) are obscured and their correct management subverted.

No doubt, the insulin treatment will be slower to depart than it was to be accepted. The "it-can't-do-any-harm-to-try" argument is not only destitute, it is false and dangerous for both patient and psychiatrist.

BIBLIOGRAPHY

1. Ackner, B., Harris, A., and Oldham, A. J.: *Lancet*, 1: 607, 1957.
2. Bellak, L.: *Dementia Praecox*. New York: Grune and Stratton, 1948.
3. Bird, E. G., Goss, J. D., and Denber, H. E. B.: *Am. J. Psychiat.*, 111: 930, 1955.
4. Bleuler, M.: *Z. ges. Neurol. Psychiat.*, 173: 553, 1941.
5. Boardman, R. H., Lomas, J., and Markowe, M.: *Lancet*, 2: 487, 1956.

6. Boling, L., Ryan, W., and Greenblatt, M.: *Am. J. Psychiat.*, 113: 1009, 1957.
7. Bourne, H.: *Lancet*, 2: 674, 1953.
8. Bourne, H.: *Lancet*, 2: 1103, 1954.
9. Bowes, H. A.: *Am. J. Psychiat.*, 113: 530, 1957.
10. David, H. P.: *Am. J. Psychiat.*, 110: 774, 1954.
11. Henderson, D. K., and Gillespie, R. D.: *A Textbook of Psychiatry*. London: Oxford Univ. Press, 1950.
12. Hoernig, J., Leiberman, D. M., and Auerbach, I.: *J. Neurol. Neurosurg. Psychiat.*, 19: 130, 1956.
13. Hoernig, J., Leiberman, D. M., and Auerbach, I.: *J. Neurol. Neurosurg. Psychiat.*, 20: 108, 1957.
14. Jensen, E.: (1952) *Act. Psychiat. (Kbh.)*, 28: Supp. 80, 129, 1952.
15. Keehn, J. D.: *J. Ment. Sci.*, 101: 871, 1955.
16. Lehoczky, T., and Lehoczky, M.: *Z. ges. Neurol. Psychiat.*, 166: 28, 1939.
17. Lifschutz, J. E.: *Am. J. Psychiat.*, 111: 466, 1954.
18. Notkin, J., Niles, C. E., De Natale, F. J., and Wittman, G.: *Am. J. Psychiat.*, 96: 681, 1939.
19. Russell, R. J., Page, L. G. M., and Jillett, R. L.: *Lancet*, 2: 1177, 1953.
20. Sakel, M.: *Wien. Klin. Wchschr.*, 45: 1372, 1933.
21. Stalker, H., Miller, W. M., and Jacobs, J. M.: *Lancet*, 1: 437, 1939.
22. Staudt, V. M., and Zubin, J.: *Psychol. Bull.*, 54: 171, 1957.
23. West, F. H., Bond, E. D., Shurley, J. T., and Meyers, C. D.: *Am. J. Psychiat.*, 111: 583, 1955.
24. Whitehorn, J. C., and Betz, B. J.: *Am. J. Psychiat.*, 113: 901, 1957.

CURRENT CLINICAL AND RESEARCH TRENDS IN SOVIET PSYCHIATRY¹

STANLEY LESSE, M.D.²

The material for this report was gathered during a visit to the Soviet Union in June, 1956. More specifically, this is a digest of information obtained from discussions with the Director of the Division of Neurology and Psychiatry of the Ministry of Health, U.S.S.R. and from visits to psychiatric and neurologic hospitals, in Moscow, Leningrad and Kiev, and research institutions in Moscow and Leningrad concerned with experimental studies in psychiatry, neurology and physiology.

THE ORGANIZATION OF CLINICAL AND RESEARCH PSYCHIATRY

Clinical neurology and psychiatry are closely integrated in the Soviet Union. The Soviet psychiatrist may be best described as a neuropsychiatrist who has shown special interest in psychiatric patients.

Clinical psychiatry is under the overall jurisdiction of the Section of Neurology and Psychiatry of the Ministry of Health, U.S.S.R., of which Dr. Bobayan is Director. This agency coordinates clinical neuropsychiatric care throughout the Soviet Union.

In the larger urban communities, such as Moscow, the psychiatric care is organized in the following way: there are sections devoted to neuropsychiatry in the general dispensaries throughout the city. If the patient's problems cannot be managed at this level, but if he does not require immediate hospitalization, he may be referred to one of the neuropsychiatric dispensaries situated throughout the city on the basis of district population. These dispensaries have several departments: 1. Adult Psychiatry and Neurology; 2. Child Psychiatry; 3. Stations: (a) Inpatient, (b) Day-stationar.

The adult and children's departments are

set up for diagnostic studies and for active outpatient therapy.

The stationar is a specialized section of the dispensary which serves as an intermediary station between the psychiatric dispensary and the mental hospital. The *inpatient stationar* has 50-75 beds where acutely ill psychiatric patients, who are too sick to be treated on an outpatient basis, can be kept from one day to one month. It serves as a diagnostic observation unit or as an active treatment service for acute, psychotic patients and is said to eliminate the necessity for long hospitalizations in many instances. It also serves as a temporary haven for psychiatric patients who require separation from a disturbed home environment.

The *day-stationar* is a unit where psychiatric patients come in the morning and remain all day returning home to their families in the evening. I was told that the inpatient and day-stationars have facilities for individual and group psychotherapy, organic therapies such as insulin coma, sleep therapy and drug therapy. Occupational and physical therapy, mental hygiene instruction and social service facilities are also available. The day-stationar ostensibly serves several purposes. It extends help to many patients by affording them the protective care and facilities of an inpatient service without completely divorcing them from their homes. On the other hand it serves a real purpose for the patient who is well enough to be discharged from a mental hospital but who is not yet ready to assume full responsibilities in the community. There are also special "logopedical stationars" for children.

Next in the chain of psychiatric facilities is the mental hospital. These have separate and distinct facilities for children. Allegedly there are no separate institutions for criminal psychotics. At one time there were a large number of special clinics and hospitals for the treatment of alcoholics. I was informed that only 3 or 4 of these are still in operation. (It should be mentioned that a

¹ Presented at the Divisional Meeting of The American Psychiatric Association, Montreal, November, 1956.

² From the Neurological Institute of the Presbyterian Hospital of New York and the Department of Neurology, Columbia University, N. Y.

sizeable number of intoxicated men were seen in the streets of both Moscow and Leningrad.) All mental hospital confinements are said to be voluntary except in the case of criminal psychotics who are committed by the court on the advice of 3 psychiatrists assigned to the court. The court can also recommend hospitalization of patients that come before it at the request of the family or community. These patients cannot be discharged until their cases are reviewed by the court psychiatrists.

In addition to these facilities there are sanitariums associated with mental hospitals situated in the rural areas or in the warmer southern districts and which are used for convalescent purposes.

Hospital and research buildings are, in general, very old and antiquated by our standards. Most of those that I visited were apparently constructed during the beginning of this century or earlier. Some of the structures were originally intended for other than medical purposes and only later were converted into research or clinical facilities. Externally the majority appeared in a poor state indeed; however, on interior inspection they were found to be clean and in good repair. One was struck by what appeared to be very large numbers of medical and maintenance personnel.

Home care is said to be stressed in Soviet psychiatry. All patients discharged from mental hospitals are followed by the local neuropsychiatric dispensaries and in the dispensaries connected with the factory or farm. I was told that it was routine practice to send psychiatric nurses into the home in an attempt to help the family adjust to the patient's needs. It is also the job of the dispensary to recommend and supervise any vocational training that may be necessary. During the course of the patient's illness, and until he is able to return to full employment he is said to receive his full wages. Only after it is determined that he will be permanently ill does his normal source of income stop. He is then put on a pension.

Neuropsychiatric research, as well as all other medical research in the U.S.S.R., is organized and carried on in a system of research institutes located mainly in the larger cities, but particularly concentrated in Moscow and Leningrad. The work in these insti-

tutes, which may have as many as several hundred personnel on the staff, is coordinated under different administrative auspices, namely: 1. Ministry of Health, U.S.S.R.; 2. Ministry of Health of the Constituent Republics; 3. Academy of Medical Science and 4. animal research relevant to psychiatry may also be carried out in institutions under the jurisdiction of the Academy of Science.

SOME STATISTICAL DATA RELEVANT TO PSYCHIATRY IN THE SOVIET UNION

Broad statistical data coming from a country whose cultural concepts and evaluations are so different from those of the Western countries must not be accepted without first being subjected to careful scrutiny. Indeed, until there is an opportunity for an extended period of careful observation of Soviet psychiatric clinics and hospitals, evaluation of all statistical data concerning clinical psychiatry must be held in abeyance.

The conception of what constitutes an emotionally ill person may differ widely in varied cultures. There are many problems which are cared for in the U.S.S.R. by government agencies other than those under the jurisdiction of the Ministry of Health that would be considered by American or Western European physicians as falling into the realm of emotional or mental illnesses. Many patients who would be categorized in this country as having psychoneuroses or character disorders would never be seen by a psychiatrist in the Soviet Union. Instead they would be considered as having a "sociological problem" and would be accounted for statistically by another government agency. For example, it was my impression that the mentally defective children were statistically accounted for by the "Ministry of Social Assurance." They did not come under the jurisdiction of the Ministry of Health unless they had some other medical problem in addition.

With these qualifications in mind, I would like to offer some psychiatric statistics presented to me during my visit. They were given to me by the Director of the Central Institute of Psychiatry of the Ministry of Health, U.S.S.R. (Professor D. D. Phedotov) and by the Director of the Section of Neurology and Psychiatry of the Ministry of Health, U.S.S.R. (Dr. Bobayan).

The Russians claim, as they did during World War II, that "psychiatric illnesses do not constitute a major problem in the Soviet Union." I was told, for example, that in 1954 there were 6 persons with psychoneuroses per 10,000 general population, or expressed in another way, there were allegedly 120,000 psychoneurotic patients in the U.S.S.R. (calculated on the basis of a total population of 200,200,000. This figure was taken from *The National Economy of the U.S.S.R.; A Statistical Compilation*, Central Statistical Administration of the Council of Ministers; Moscow, 1956). This allegedly represented 6.8% of all psychiatric illnesses. During World II the figure was quoted as 10/10,000 general population. Involuntary psychoses were also said to be very uncommon. Schizophrenic patients made up 54.9% of the hospitalized mental patients in 1954, while they accounted for approximately 50% of the patients seen in the day-stations.

There are 0.8 psychiatric beds/1,000 general population or a total of 160,000 for the entire U.S.S.R. Reportedly, in mental hospitals, there was one psychiatrist to every 28.4 patients and one nurse to every 5.8 patients. The average duration of hospital stay was 129 days. Allegedly there were 92.7 persons discharged from mental institutions for every 100 admissions. In 1954, 28.8% of all patients entering mental hospitals had schizophrenia. The number of new cases of schizophrenia being admitted is said to be decreasing, while readmissions are increasing. There was an increase of 18% in the number of schizophrenics seen in large city dispensaries in 1954 as compared to 1953. Psychiatric hospitals usually have less than 1,500 beds. The Central Institute of Psychiatry of the Ministry of Health, U.S.S.R., in Moscow, which is probably the leading psychiatric institution in the Soviet Union, has 1,800 beds, a number which was considered excessive by its director. It is staffed by 200 psychiatrists and 1,800 other personnel.

TRENDS IN PSYCHIATRIC TREATMENT

Psychotherapy in the Soviet Union bears little resemblance to the techniques commonly practiced in the Western countries. Analytically oriented psychotherapy never

attained a significant status in Soviet psychiatry. Indeed it is held disparagingly and is considered an unscientific theory based on "arbitrary metaphysical idealist concepts." Unconscious conflict is considered to be of relatively little importance. "Psychotherapy emphasizes the patient's relationship with his environment." His difficulties are interpreted as being due to his conflicts with his environment. By techniques of persuasion, suggestion and interpretation the Soviet psychiatrist emphasizes the patient's role in the communistic group. The therapist emphasizes the fact that "the patient is a member of a group and that he will derive great benefits and security *only* from the collective strength of the group."

It is in this context, it appeared to the author, that psychoanalytically oriented psychotherapy has been adversely considered and would indeed fail in the treatment of psychiatric patients in a communistic community. It might render the patient less able to cope with his environment. The pertinent point is that communistic philosophy stresses that the individual is a part of a group and has importance, strength and security *only* as he is part of the group. Analytically oriented therapy, on the other hand, emphasizes the importance of the *individual* by encouraging the patient to reflect upon himself, to be aware of personal feelings, to delve into his unconscious mind. This concentration on the self would ill prepare the psychiatric patient for his return to his role in the Soviet group, a role which disparages his individualism.

Since Soviet psychiatry is physiologically oriented, one might correctly expect that organic therapies are utilized extensively. Sleep therapy is widely used. The rationale for this therapy is based on Pavlov's concepts of "protective inhibition" a concept which proposes that when nervous activity is suspended in a certain manner, it has definite restorative effects on neurogenic functions. The Klaese type sleep therapy is not used. The technique used at the Central Institute of Psychiatry produces 16-18 hours of sleep per day by administering 0.1-1.0 gram of sodium amytal. During the remaining 6-8 hours the patient is awake, takes nourishment and receives psychotherapy.

This is repeated for 10-15 days. In some instances the technique is combined with other therapies. For example, it may be used on alternate days with insulin coma. I was told of an "electro-narcosis" technique which produced "physiological sleep." I did not see it in operation.

Insulin coma is extensively used in the treatment of schizophrenia. A full series of treatments consists of 10-15 comas. Electroshock therapy is still in use, but allegedly only in rare instances. Psychosurgical procedures were banned in 1950 as being "unphysiologic and contrary to Pavlovian concepts of protective inhibition."

The tranquilizing drugs such as chlorpromazine (known in the U.S.S.R. as Amazine) and Rauwolfia Serpentina are widely used but not as extensively as in the Americas. The dosages are in general far less than used here.

An amphetamine (called Phenamine) is also commonly used. Caffeine, given intravenously, in combination with sodium amytal is used at times in catatonic stupor. It is theorized that the "amytal causes a physiologic release by the subcortex, while the caffeine acts as a cortical stimulant."

The inhalation of an 80% nitrous oxide-20% oxygen mixture is recommended in some cases of schizophrenia, depression or paranoid states. It is administered for 5-20 minutes on 3 consecutive days.

Hypnotic therapy which was once claimed to have "useful restorative and sedative functions" has lost favor and is now rarely used.

PSYCHIATRIC RESEARCH TRENDS

Soviet psychiatry, as with all branches of Soviet medicine, has been dominated by the figure of Pavlov. This has been particularly so since the centennial celebration of his birth, in 1949. Since that time there has been a marked reaccentuation of his concepts and methodology. In line with this, neuropsychiatric research has concentrated to a great extent on the study of highest nervous activity (conditioned reflexes), the effects of visceral function on cortical activity and vice versa, the study of principles of "protective inhibition" through various types of sleep therapy; the study of the genetics and ontogenesis of highest nervous activity.

In the pursuit of these studies there ap-

pears to be a close cooperation between psychiatrists, neurologists, physiologists, anatomists, biochemists, geneticists, etc., working in multi-disciplinary teams in large research institutes such as the Central Institute of Psychiatry of the Ministry of Health, U.S.S.R., (Director: Professor D. D. Phetotov); Moscow Brain Institute of the Academy of Medical Sciences, (Director: Academician S. Sarkisov); Pavlov Institute of the Academy of Sciences, (Director: Academician K. M. Bykov) to name three.

The following are a few illustrative experiments: 1. In the laboratory of the Ontogenesis of Highest Nervous Activity in the Pavlov Institute of Physiology, Professor Troshekin has been studying the development of the nervous system under different environmental conditions. Alterations in conditioned reflexes are used as the objective measurement of change. One series of experiments appeared to have interesting psychiatric application. It was designed to reveal, when the "reflex of fear" or "reflex of passive defense" would first appear in puppies. They had previously determined that the "awareness reflex" (the puppy's first reaction to his environment with curiosity) appeared, when the dogs were approximately one month old. They took a number of dogs, about one month of age, and divided them into different groups of which I will mention two.

Group A—was exposed to 90 decibel sounds and was fed at the same time.

Group B—was exposed to 90 decibel sounds and at the same time to pain produced by a 40 volt electrical shock.

In Group B, where initial awareness was associated with pain, the dogs quickly became afraid of the experimenters. They then became afraid of any and all moving objects. The reaction to objects became so strong they would lose control of their sphincters, lost weight and developed alopecia. These animals who were repeatedly frightened during the period of initial awareness have remained frightened in all situations after 2½ years of observation in spite of attempts at corrective environmental change. Animals in Group A who were exposed to sound plus food reacted with normal curiosity to their environment and did not show the fear response.

In a second series of experiments, they took dogs 3 months of age and exposed them to the same studies. They found that they could produce the fear response in these dogs but gradually the fear response disappeared.

In a third series of experiments they found, in dogs who had been irrevocably frightened at one month of age, they could produce only one conditioned reflex at a time, even if the animal was tested a year or more after the initial traumatizing experiments. If they tried to establish another, the first was inhibited. In animals who were not frightened, new conditioned reflexes could readily be established without inhibiting the first.

Another interesting bit of work that may seemingly be of importance to psychiatry is the study of the so-called "second signal system" as stimuli in the production of conditioned reflexes. The term "second signal system" requires some explanation. Stimuli such as sounds, rhythms, lights, etc., are what may be called "first or primary signal systems" which can be used in producing conditioned reflexes in animals as low in the evolutionary scale as goldfish. The "second signal system" involves the use of the "meaning of words or language" and therefore this can only be studied in man. Much of the work in the "second signal system" is going on in the Laboratories of Interoceptive Conditioned Reflexes of the Pavlov Institute of Physiology under the direction of Academician Bykov and Professor Airapetianz.

They described to me in great detail, experiments in humans in which the "second signal system" was used to establish "cortical control over normal and abnormal functions of the bladder, stomach, skin, etc., by means of conditioned reflexes." For example, they described experiments in patients with proven peptic ulcers in whom mass gastric contractions caused pain. By establishing a conditioned reflex in which the pain producing contractions were associated with a specific number, they report that they were able to prevent the occurrence of the painful contractions and thereby enhance ulcer healing.

Bykov asserts that they have shown, in laboratory animals and in man, that cortical

control over all visceral organs is possible. He states that there is a very active reciprocal, functional relationship between the viscera and the higher cerebral centers "being carried on by means of complexed humoral and neuro-humoral mechanisms" some of which, he states have been identified. Bykov expressed the belief, that through further studies of the second signal system and of cortical-visceral relationships they will contribute to the knowledge of the origin of normal and abnormal emotional behavior.

COMMENTS

This report represents a limited survey of some of the leading psychiatric and neurophysiological institutions in the U.S.S.R. It does not offer any first hand observations of how psychiatry is practiced in other urban mental institutions, and particularly it does not include any information about the level of psychiatric care in the more remote eastern constituent republics within the Soviet Union. Other recent medical visitors to the U.S.S.R. from Canada(1) and the United States(2) were impressed by the caliber of the leaders of Soviet medicine and by the high quality and originality of some of their work. My impressions are in general agreement with those expressed in these previous reports.

It must be stressed once again that psychiatric organization and practice in the Soviet Union differ radically from that in the United States and Western Europe. Psychotherapeutic orientation is particularly at odds with our concepts. The figure of Pavlov dominates psychiatric research as it does all of Soviet medicine. As such, the conditioned reflex is used as the measure of objectivity in most research evaluation. An extended period of observation by many western psychiatrists, neurologists and neurophysiologists will be necessary in order to obtain a more complete picture of Russian neuropsychiatry.

BIBLIOGRAPHY

1. Penfield, W.: *Can. M. A. J.* 73:891, Dec. 1, 1956.
2. MacLeod, C. M., Meyer, K. F., Shimkin, M. B. and Shope, R. E.: *J. A. M. A.* 162:650, Oct. 13, 1956.

PSYCHIATRY AND HIGHER EDUCATION IN FINLAND¹

KAUKO KAILA, M.D.²

Some 15,000 students (about 3.5 per thousand of the total population of over 4.3 millions) are studying at the various universities and colleges in Finland. The majority of the students, 13,000, are studying in Helsinki, the capital. Almost 40% are women. Twenty-five percent of all students at the university and colleges in Helsinki make use of the Student Health Service on an average of twice a year. Three percent of them are referred to the psychiatrist, the average number of visits of each patient being 4. About 2% of all students consult the psychiatrist during their years at Helsinki University, an extremely low percentage.

According to a noteworthy Committee Report⁽¹⁾, 10% of American students ask for psychiatric assistance, if it is easily available. According to R. W. Kohl (Cornell University)⁽²⁾, 25% of the medical students seek psychiatric aid or advice, when the psychiatrist is their teacher as well as their therapist, and about one-half of them require actual psychotherapeutic treatment.

The present material consists of 203 students, who have consulted the psychiatrist (about 40 of those referred failed to come); some of these 203 proved to be non-psychiatric cases, others again averse to therapy or otherwise "impossible," so that the number of those psychotherapeutically treated was reduced to 164. In judging the representativeness of this material, it must be taken into account that violent psychoses were immediately sent to mental hospitals.

As an object of research such a group of thoroughly examined young people is most valuable and interesting. This kind of research material is uniform in that it is composed of young people living under similar external pressure in that important period of life when they should emancipate themselves from home and parents, become independent and socially adjusted. It is this age group

that contains one of the peaks of psychic disorders. It can further be said that, for several reasons, university studies constitute one of the most effective and rigorous tests of both intellectual and emotional maturity.

Ability to study, i.e., continued academic performance, is a very significant and obvious gauge of emotional maturity and mental health in students. The sensitiveness of this gauge is shown, by the fact that many students who are unable to study are well able to earn their living by doing intellectual work, *i.e.*, inability to work in the case of the student is his inability to study. In Finland an unexpectedly large number of students—for instance one-third of the entire student body at Helsinki University—"fail" in their studies and drop them. Similarly, the completion of studies may take a great many graduates several years more than expected. In general the discontinuance of studies is not due to a freshman's inconstancy, but occurs late during the third or fourth year and must be taken seriously. The percentage of discontinuance is much higher in the faculties of arts (50% in the faculty of philosophy) than in the actual professional faculties (5-15%), where the curriculum consists of systematic courses and practical work. Some previous non-psychiatric and non-medical investigations in Finland have yielded the conclusion that, as a rule, the reasons for dropping the studies are not financial, but that some kind of personality problem is of primary importance.

With regard to the *year at the university*, the patients are distributed evenly enough. More than one-third of the students examined have been *working for a living* permanently or temporarily during their years at the university; this figure corresponds approximately to the present practice in Finland.

THERAPY

The *urgency of treatment* is a significant factor in psychiatric and psychotherapeutic material. As the number of students treated

¹ This paper presents the writer's experiences as the consulting psychiatrist of the Student Health Service in Helsinki during the three-year period 1952-55.

² Im Walder 6, Zurich 8, Switzerland.

yearly by the writer represents only an average of 0.42% of the total, the present material naturally contains many exceptionally serious cases and an even larger number of increasingly critical situations. Almost one-half of all the cases required immediate intake; the percentage of psychoses or psychotic episodes has been about 13. In corresponding American material (1, 3, 4, 5), the frequency of urgent cases has fluctuated between 25-34% and the psychosis frequency between 2.6 and 4.5%. However, it seems to the writer that considerably stricter criteria as regards urgency have been applied in the present material.

As a rule, urgency is considered almost exclusively to be a handicap in psychotherapeutic treatment. Though the writer had to plan the treatment to occupy a few hours only in most instances, owing to various external circumstances, it was found that the pressing nature of cases and situations offered many advantages. It is partly a consequence of the reticent character of the Finnish people and their erroneous ideas about adult status that often only a real emergency and a hopeless impasse can induce a Finnish student to seek psychiatric aid and make him (and then also his parents) take a really positive attitude toward the basic conditions of psychotherapy. A good therapeutic relationship may then be established very quickly, which is an absolute necessity in short, intensive treatment of this kind.

Owing to the unusually short duration of therapy, it must be particularly emphasized that this is not an instance of "psychiatric counselling." The intention has always been to gain an insight into the real life situation of the patient and his unconscious difficulties, though of course only within the profile or on the level where these difficulties manifest themselves during the therapy of a few hours. Such profiles may look quite different in prolonged therapy. Even in brief therapy, it is naturally important for the psychiatrist to be able to gain an insight as deep as possible into the case, though it is frequently the actual conflict situation that determines and guides the psychiatric procedure. As a rule, the patient has completely misjudged his essential life situation and his more pressing conflicts. Therefore the practical measures

suggested by the psychiatrist involve very great external changes (*e.g.*, leaving home, changing one's career, temporarily giving up studying, etc.). This implies that the patient himself has to see the basis and background of the suggested measures in broad outlines at least; otherwise he will naturally not be able to follow the advice. It is therefore often necessary to interpret to the patient at least those unconscious difficulties, on which the practical advice of the psychiatrist is based, and it is this very part of the therapy that has to be carried out with utmost care and discretion, as it often forms the nucleus of the entire treatment, and if successful may bring about fundamental changes in the patient's life.

The experience gathered in the rapid treatment of the first 100 students will be of great benefit to the following 100, as the therapist can then very quickly distinguish many subtle disproportions in the patient's life. These disproportions again can often be accounted for only by latent personal problems, of which they are symptomatic. For instance, the estimation of real intellectual potentialities in a student becomes easier and more complete with increasing experience, so that different tests are rarely of any use later on.

In about half of the cases the *duration of therapy* has been 3 hours or less, which has usually included 3-5 visits. Only 12% of the patients have had more than 10 hours of therapy; 8 patients within this group were psychotics. The former number of therapeutic hours is nearly the same as the one in the American material of Fry (5), while the latter is much lower. The small number of patients who had prolonged treatment shows that therapy, even in the case of psychoses, was of necessity reduced to a bare minimum: this often involved contact with the closest relatives and friends of the patient. Seven students had to be sent to a mental hospital; in 24 cases the therapist had discussions with relatives, friends, teachers, employers, etc.

Practical solutions and external changes were frequently undertaken, though the general tendency was to avoid such directive activity during psychotherapy. In the writer's opinion, unnecessary passivity and harm-

ful caution in this respect are often observed particularly in those psychiatric circles where analytic treatment is considered a rule in more difficult cases. If circumstances do not allow prolonged therapy, it seems better to give advice than to leave the patient in a continued state of distress. Relying on a good relationship and knowing the patient sufficiently well, the therapist must assume responsibility for certain essential solutions, even urge the patient to take them, if there is no time to wait for these solutions to mature in him—or to wait for him to mature. The practical solutions, which have been considered, have naturally been varied. The most important and frequent suggestion made by the writer was that the patient should emancipate himself externally from his childhood home and parents to as great an extent as possible, associate actively with young people of his own age and seek different forms of independent living (see below: special circumstances in Finland in this respect). In about one-fourth of the cases it was suggested that the student should considerably change his schedule of studies, go over to another faculty, or drop his studies altogether.

The disturbance of studies, or the degree of inability to study, has already been touched upon. The studies of about 64% of students within this group were seriously disturbed when they came for treatment, while it can be said with certainty that the studies of only 21% had not suffered (many of them were "overgifted"). The studies of more than one-third of the patients had been seriously disturbed at least for one term. Nearly 20% of the cases seemed to be hopeless as regards the passing of the final examination, and some of these, following the therapist's advice had discontinued their studies already during therapy. However, at least 4 of these "hopeless" cases later went in for actual psychoanalytic treatment, which has restored the ability to study to 3 of them.

No attempt has been made to set *descriptive diagnoses*, since it is of no use, sometimes rather the contrary. The lives of most patients, as well as their illnesses, were in a stage of vaguely taking shape; various possibilities of development were open or possible, and the therapeutic process and the

changes connected with it frequently constituted a significant turning-point. The purpose of the following "diagnostic" classification is to focus attention mainly on the patient's life situation and most essential difficulties, and often also on the leading principles of some therapeutic solutions.

Intellectual difficulties and limitations have not played a particularly important role in the lives of the students who have consulted the psychiatrist, as was to be expected; they have been essentially significant in a few cases only. In 34 cases the intellectual limitations have been a significant factor in the troubles and difficulties of those examined; 6 students were absolutely unable to take their degrees because of their limited intelligence. It is a noteworthy fact that these 6, as well as most of the other 28, were not aware of their intellectual difficulties. This has usually been due to a strong effective repression (coupled with a certain talent while at school); the intellectual limitations have been carefully dismissed from consciousness as being a painful problem, sometimes the most essential one. Behind this repression one usually finds a strong compensatory ambition and farther back, rather often—ambitious parents. Two of the said 6 students had already drifted into a psychosis after having spent many futile years at the college.

On the other hand, the intellectual difficulties of the other 28 students within this group were not insuperable, as regards the proposed goal of study; they had, however, marked emotional difficulties in addition. It may be said of several of them that if they had been somewhat less entangled in their intellectual and emotional difficulties, their studies might have progressed in a relatively normal way; possibly they would not have consulted the psychiatrist at all.

EMOTIONAL DIFFICULTIES

Retarded and warped emotional growth and maturation have proved to be the basic and most important problem of the present group of students, as was to be expected. This has been the case also with American students (5, 6). The difficulties of at least 112 students of this group were found to be

disturbances in emotional growth. There has been a wide variety of clinical pictures, among others a few psychoses and some serious psychopathic cases or character neuroses, in which the personality was already so badly warped that only actual psychoanalytic treatment might have been expected to bring about greater improvement. However, most of these 112 have been young people whom it has been possible to help and guide to a gratifyingly high degree in what has often constituted the first—perhaps even the most important—crisis in their lives.

As regards the national character of the Finnish people, it may be said that psycho-infantilism is common, yet frequently all the more strongly disguised, since childishness in adults is held in contempt and finding it in oneself is feared. This applies particularly to men, who for fear of their childishness being discovered and in their efforts to disguise it, often condemn also such qualities characteristic of a mature adult as spontaneity, modesty, tolerance, respect for other people, feeling of solidarity, and normal interdependence. There is very little spontaneous talking among people. (Proverb: Speech is silver, silence is gold.)

As distinguished from the groups listed below, the only heading for the difficulties and disorders in 53 cases is "emotional immaturity," varied as these cases otherwise are.

The basic situation of 27 students may be called *mother or father fixation*; their dependence on the parents had remained so strong and their relationship to them—usually to one of them—so close that the centre of gravity of their lives and the main part of their interests were still clearly with father and mother. Great efforts were required to persuade these young people to stay at home as little as possible, to spend their weekends and holidays elsewhere, or sometimes to move away from home. When difficulties arose, these patients often wanted first to return home just to be ill, which, of course, was the worst possible solution and "treatment."

Now it must be kept in mind that in Finland the students do not live on a campus and that external community feeling and social contacts among them are in general

much slighter than in the U.S.A. Most students live in lodgings in the town or its vicinity and usually take their meals at cafés and restaurants; thus there are many whose compulsory or natural contact with their fellow-students is limited to the attendance at lectures. In this respect, the professional faculties are in a better position, with systematic theoretical and practical studies closely interwoven. Many young people with difficulties in social adjustment begin to isolate themselves to an ever increasing degree, since external conditions make it far too easy, whereas they should almost be compelled to associate with other people, thus gaining at least some kind of social "routine." In many instances, a marked change has been brought about merely by the fact that the therapist has succeeded in pointing out to the patient various noxious consequences and risks of isolation and home fixation.

Strong infantile sexuality has been the most conspicuous actual difficulty of 15 students. As a whole, this group has been emotionally much more mature than the foregoing one. In some cases one might speak of "sexual panic," which implies that a young person, not yet knowing how to dispose of a strong emotion like this, represses it downright, or curls up around it, or continues to form new intimate relations, which soon prove a failure. A very rigid conception of morals again, has rendered it impossible for some patients to gratify their need for affection in any way, while the immediate environment has greatly helped to aggravate the situation for others.

A *prolonged serious panic situation* had led 14 students to consult the psychiatrist. This group, which included 6 psychoses, was relatively large and the most difficult one to help. By means of brief therapy, 3 of these 6 patients were considerably helped. The other 3 would probably have remained chronic cases, but 2 of them sought psychoanalytic treatment and have now decisively improved. Many of these states might, in accordance with Kempf, be termed homosexual panic within the profile provided by brief psychotherapy. There were 3 serious manifest perversions in this material: 2 homosexuals and one "classical" masochist.

Certain external dependence has interfered to a considerable extent with the studies and health of 16 students and aggravated their conflict situations. Very exceptional parents or other relatives, on whom the student has been wholly dependent financially, were usually involved; sometimes the family of the husband or wife, fiancé or fiancée, was the worst actual factor of disturbance. It is to be noted, however, that the noxious external dependence mainly drew its strength from the patient's personal peculiarities and inner dependence. On the other hand, this group contained several young people who, under different circumstances, almost certainly would have got through their college years without psychiatric aid. This material contained 4 students, whose difficulties accumulated from several very different directions or who otherwise remained too vague to the therapist.

FINANCIAL AND HOUSING DIFFICULTIES

These difficulties for students in Helsinki are exceptionally great. The housing shortage borders on a catastrophe; the rent for even quite a small spare room is very high and a great many students have to live far outside the city. Thus the problem of how to spend the free time between the lectures and practicals is hard to solve, particularly as there are very few cheap and comfortable student restaurants.

It may be said at any rate that just as often as students themselves complain that their difficulties and discontinuance of studies are due to external and financial troubles, just as seldom do these troubles prove to be fundamental causes. A reasonably balanced and independent young person seems to be able to manage his life so that he does not, for example, enter the university or college at all, if sufficient funds or other necessary qualifications are lacking. It has often happened that a student has drawn up a study schedule for 4 years, yet finds that it will require 6 years to carry it through; the funds then run out too early. In cases like this, the over-estimation of one's own potentialities and gifts has been so marked as to be ascribed only to a very exceptional emotional

structure, often to compensatory, excessive lack of discrimination and ambition. The financial difficulties and various subsequent handicaps during the last college years are then of a purely secondary nature.

SUMMARY AND CONCLUSIONS

The difficulties and mental disturbances of Finnish university and college students are in most instances due to personal factors, retarded or otherwise disturbed emotional growth and maturation interwoven with family relations, and insufficient attainment of independence and adulthood. The significance of intellectual difficulties is of minor importance among the factors referred to above, since even in the cases where marked intellectual difficulties were found—*i.e.*, in about one-fifth of the total number examined and given psychotherapy—emotional disturbances proved to be the primary reason. Rather loose social ties among the students, the lack of campus life, and the reticent Finnish character favour the fatal isolation from suitable company. Finnish students live in great financial and housing difficulties, which considerably increase the already serious pressure and strain of the college years. University students are very susceptible to short intensive psychotherapy. It would be most desirable that the students should have their own (full-time) psychiatrists. The fact that an uncommonly high number of students—more than one-third of the entire student body of Helsinki University—discontinue their studies is probably in most cases due to emotional disturbances, though the students themselves provide every other possible cause for their failures.

BIBLIOGRAPHY

1. A Committee Report of the Group for Advancement of Psychiatry: *Psychiatry in Higher Education*, 1950.
2. Kohl, R. W.: *Am. J. Psychiat.*, 108: 198, 1951.
3. Bond, E. D.: *Am. J. Psychiat.*, 109: 11, 1952.
4. Raphael, Th.: *Am. J. Psychiat.*, 92: 855, 1935.
5. Fry, Cl. C.: *Mental Health in College*. New York: The Commonwealth Fund, 1942.
6. Farnsworth, D.: *Ment. Hyg.*, 38: 34, 1954.

CLINICAL NOTES

FRACTIONATION AND QUANTITATIVE ANALYSIS OF CEREBROSPINAL FLUID CONSTITUENTS WITH REFERENCE TO NEUROPSYCHIATRIC DISORDERS

SAMUEL BOGOCH, M.D.¹

Although the cerebrospinal fluid is a relatively accessible part of the central nervous system, the quantitative study of its organic constituents has been hampered by their presence in high dilution. The earlier demonstration in this laboratory (2) that the total concentration of neuraminic acid in the C.S.F. of schizophrenic patients is lower than that of non-schizophrenic subjects and comparable only to the values found in some children under the age of seven, which has now been extended to a series of 250 cases, made it desirable that the distribution of neuraminic acid between macro- and micro-molecular species be determined. The present report² briefly outlines methods which have been developed for the determination of the various carbohydrate and protein substances in individual specimens of cerebrospinal fluid, and presents further evidence of an abnormality in C.S.F. fluid neuraminic acid content in schizophrenic patients.

Seventy-six individual specimens of C.S.F. fluid, obtained in routine diagnostic and anesthetic lumbar punctures in a variety of both nervous and non-nervous disorders as well as in normal subjects, were analyzed within 4 hours for protein, glucose, cellular content, and dry weight, and the total neuraminic acid content was determined. The individual sample (30-50 cc.) was then lyophilized, the dried material weighed, taken up by several washings in a total of 5 cc. of glass-distilled water, and dialyzed quantitatively at 4° C against 10 cc. of water through cellophane (from which all water-

soluble contaminants had been quantitatively removed by prior washings with distilled water). The outside water was changed at alternating 9- and 15-hour intervals until no further diffusible material was obtained. This was almost always (in 75/76 cases) achieved by the 10th change, the total 11th diffusate containing less than 1 mg. dry weight. The combined diffusates were made up to an exact volume (usually 100 cc.) and designated the diffusate. Ten cc. of the diffusate was used for analysis, the balance lyophilized and stored for further study. The non-dialyzable material was quantitatively transferred with three 0.5 cc. water washings to a volumetric flask and the volume made up to 10 cc. with water (whole non-dialyzable). The whole non-dialyzable and the diffusate fractions were both quantitatively analyzed in terms of dry weight, as well as nitrogen, phosphorus, neuraminic acid, hexosamine, and hexose content, and in addition, the reducing sugar of the diffusate was determined. Table 1 summarizes the overall range and mean of values. If only between 15 and 30 cc. of spinal fluid was available, an abbreviated analysis was performed. Thus, the lyophilized cerebrospinal fluid was weighed, taken up in a total of 3 cc. of water, and dialyzed against 6 cc. aliquots of water to completion. The total non-dialyzable fraction was made up to 5 cc., permitting only the dry weight, neuraminic acid and hexosamine to be determined. The diffusate fraction was made up to 60 cc., a 10 cc. aliquote used for a full analysis, and the balance lyophilized.

The recovery in terms of dry weight showed a mean value of 99.0%, with one-half of the values falling within $\pm 6.0\%$ and the balance falling within $\pm 13.0\%$. The whole non-dialyzable neuraminic acid accounted for between 16.7 and 59.2% of the

¹Neurochemical Research Laboratory, Massachusetts Mental Health Center (Boston Psychopathic Hospital), and Department of Psychiatry, Harvard Medical School, Boston, Mass.

²This work has been supported in part by a grant from the U.S. Public Health Service (B1-221). Mr. Peter C. Belvel gave excellent assistance.

TABLE 1

	Whole Non-dialyzable		Fraction G	
	Range	Mean	Range	Mean
Non-dialyzable fraction				
Dry weight, (as mg./cc. whole CSF).....	0.18- 0.99	0.463	0.084- 1.04	0.406
% Nitrogen	11.3 -17.0	13.4	11.7 -20.8	15.2
% Phosphorus	0.05- 1.27	0.30	0.06 - 1.27	0.50
% Neuraminic acid	1.3 - 5.2	3.05	0.79 - 4.86	2.12
% Hexosamine (as galactosamine).....	0.6 - 3.7	1.7	0.72 - 5.25	2.70
% Hexose (as glucose).....	1.5 -10.4	5.5	0.80 -13.4	5.9
Diffusate fraction				
	Range	Mean		
Dry weight, (as mg./cc. whole CSF).....	7.4 -13.9	9.24		
% Nitrogen	0.23- 3.71	1.23		
% Phosphorus	0.01- 0.60	0.12		
% Neuraminic acid	0.06- 1.00	0.45		
% Hexose (as glucose).....	1.85-20.0	7.51		
% Reducing sugar (as glucose).....	2.0 -17.9	8.00		

total neuraminic acid (mean 32.6%), the balance being diffusible. Since hexosamine was absent from the total diffusate, the diffusible neuraminic acid could not have been conjugated with a hexosamine.

The whole non-dialyzable fraction always contained a slight to moderate amount of poorly soluble material. If this fraction was centrifuged at 2000 r.p.m for 5 minutes, a clear supernatant and a small white precipitate could be easily separated. The clear supernatant (Fraction G) was found to differ in its analysis from that of the whole non-dialyzable fraction (Table I). In 5 individual specimens, the major component of Fraction G contained nitrogen 16.7% ($\pm 1.7\%$), neuraminic acid 3.0% ($\pm 0.6\%$), hexosamine 4.0% ($\pm 0.7\%$) and hexose 9.3% ($\pm 0.35\%$). Further purification of Fraction G is in progress. The contribution to the total neuraminic acid of the original cerebrospinal fluid which is made by Fraction G (GNA) was found to be 0.6 to 22.0 micrograms per cc. C.S.F. fluid.

While the neuraminic acid content of the whole non-dialyzable fraction bore no constant relationship to the value for the total neuraminic acid of the C.S.F. fluid, GNA was found to parallel closely the total neuraminic acid; the higher the value for total neuraminic acid in the C.S.F. fluid, the higher the value of GNA. Schizophrenic subjects (18 out of 19) showed GNA values below 9.5 micrograms (1.8 to 9.3; mean 6.7). Three children under 7 years of age also showed GNA values below 9.5 micrograms. On the other hand, children over 7

and non-schizophrenic adults (in 10 out of 13 cases) showed GNA values above 9.5 micrograms (9.6 to 22.0; mean 12.6). It may be noted that each of the non-schizophrenic adults who had a GNA value below 9.5 had a brain neoplasm.

The findings on Fraction G provide a second independent measurement which correlates well with the measurement of total neuraminic acid in C.S.F. fluid, and supports the finding (1) that there is an abnormality in the neuraminic acid-containing substances of the C.S.F. fluid of schizophrenic patients. Related studies in this laboratory (2-5) which deal with the structure and function of the neuraminic acid-containing brain gangliosides are pertinent in this regard, since membrane transport and receptor functions are suggested.

The quantitative analysis of individual specimens in terms of protein and carbohydrate constituents has provided considerable information which will be discussed in detail elsewhere. The relatively gentle fractionation here presented permits, in addition to the analysis of individual specimens, the further detailed study of pooled subfractions, with the assurance that no major component is neglected in either case.

BIBLIOGRAPHY

1. Bogoch, S.: *Am. J. Psychiat.*, **114**: 172, 1957.
2. Bogoch, S.: *Nature*, **180**: 197, 1957.
3. Bogoch, S.: *J. Am. Chem. Soc.*, **79**: 3286, 1957.
4. Bogoch, S.: *Biochem. J.*, **68**: 319, 1958.
5. Bogoch, S.: *Virology*, **4**: 458, 1957.

A NEW NASO-PHARYNGEAL AIRWAY FOR USE WITH CEREBRAL ELECTRO-CONVULSIVE THERAPY

JOSEPH EPSTEIN, M.D.¹

The satisfactory end point of an electro-convulsive treatment is the return of normal respiration plus the other vital signs. Standard auxiliary equipment in connection with ECT apparatus is an airway to facilitate respiration at any time required. The difficulty in the resumption of respiration following the convulsive seizure is frequently mechanical. By mechanical, we mean an obstruction to the passage of air due to increased or decreased tonus of the tissues or structures of the nose, mouth, pharynx or larynx. This is often noted in elderly edentulous patients when, during and following the convulsion, their nostrils seem to collapse over the upper lip and the mouth is tightly closed. In such cases, the insertion of an airway prevents hypoxia and cyanosis which usually develop before the nares become patent or the mouth opens. Another example is the tendency of the tongue to fall back and interfere with the passage of air. When the patient either doesn't get enough air or isn't breathing at all and shows a corresponding degree of cyanosis, the insertion of an airway is indicated. The airway also permits the application of oxygen should it be required.

The airways in almost universal use at present are the oral type which are inserted through the mouth. The oral route of insertion is frequently difficult. Those of us who have had occasion to insert an oral airway at the end of a convulsion have from time to time experienced great difficulty in prying open the jaw, only to find the teeth almost impossible to separate and on forcing in the airway, injury has been done to the teeth or tissues of the tongue or mouth. In clinics where succinyl choline is used it makes it increasingly important to have proper airways so that oxygen can be administered without delay.

We are about to describe a nasal airway which has all the advantage of the oral type and apparently none of its disadvantages. It is a curved, flexible, synthetic naso-pharyngeal airway which is 6 inches long and which

can easily be inserted in either one or both nostrils, at any moment which one selects, either routinely before or during the convulsive seizure, or when there is any difficulty in breathing following the termination of the convulsive seizure. This airway comes in various sizes. It is open at one end and has auxiliary openings to increase the amount of air or oxygen flowing through it. The nasal end is wide and funnel shaped to ensure against its being sucked into the nostril. The tube need not be inserted to its full length, and satisfactory results may be obtained after it enters the nasopharynx—and $\frac{1}{2}$ to 1 inch protrudes from the nostrils. By inserting it through the nostril, it by-passes the teeth, the tongue and hard palate without disturbing the jaw. It overcomes all the disadvantages inherent in the airways which are used through the mouth and there is no risk whatever in injuring the teeth or soft tissues. One tube is generally adequate and can be inserted into either nostril. Should there be an obstruction in one side, the other nares can be used, or one may insert two tubes. With the tube in place, the air enters the throat in the same manner as when coming through the nostrils or the oral airway. Aspiration of fluid from the nasopharynx is easily effected by applying suction through the tube. The extreme efficiency of these tubes is most easily demonstrated on any patient either during or at the end of the seizure by merely inserting the airway and hearing the free swish of the breathing back and forth through the tubes; inadequate or stertorous breathing suddenly becomes smooth and free. If the patient should be edentulous, one can be convinced of its efficiency at the termination of the convulsion by first inserting the tube, hearing the breathing and then removing it to find that instantly the breathing becomes labored and difficult through the mechanical closure of the airways in the nose. Frequently in passing the nasal tube, one can actually feel the tube passing through a posterior nasal constriction or spasm and as soon as this occurs, the respiratory air breaks through. In clinics

¹ Pinewood Psychiatric Institute, Katonah, N. Y.

These small doses of succinyl choline are used and where the jaw is not completely closed after the seizure, these airways are inserted at the termination of the seizure, and normal breathing is delayed, oxygen can be administered at once without the necessity of prying open the mouth.

The utter simplicity of this procedure recommends itself for use. We have been using these tubes for the last 6 months in many hundreds of treatments and they have also been used with universal approval in the

clinics where we have demonstrated them. We feel that they are a distinct addition to ECT accessory equipment. We no longer use the oral type airway, but keep it on our emergency tray, for a rare case where there might be bilateral nasal obstruction due to polyps or other pathology. We are therefore presenting this to the profession. These tubes have been designed for us by the Davol Rubber Company with the cooperation of Dr. William A. Gants, Director of Professional Production Department.



Actual size of naso-pharyngeal airway.

CLINICAL IMPRESSIONS OF THE RESPONSE TO PROMAZINE THERAPY

LUDWIG FINK, M.D., AND GEORGE VLAVIANOS, M.D.¹

Promazine² was administered, in total daily doses of 300 mg. to 1.5 Gm. for 2 to 13 months, to 200 ward patients 22 to 70 years old. Diagnoses included paranoid, hebephrenic, catatonic or simple schizophrenia (152 patients); manic-depressive psychosis (4 patients), psychoneurosis (7 patients), psychosis with mental deficiency (5 patients), and psychosis resulting from alcoholism (32 patients). Classification of the patient, however, was based on the prevailing symptoms: 1. violence, overactivity and insomnia. 2. anxiety, tension and irritability. 3. antagonism, hostility and paranoid ideation. 4. nonviolent hallucinations and delusions. 5.

withdrawal, but mentality and adaptability apparently still preserved. 6. negativism, catatonia. 7. nonviolent or moderate deterioration with impoverishment of initiative. 8. severe deterioration with deep regression, wetting and soiling.

All had been ill 1 to 15 years. Twenty-two had been repeatedly treated unsuccessfully with electro or insulin shock, or had received psychosurgery; other ataraxics had been used for 41 without improvement.

Optimal dosage with promazine was determined cautiously by individual trial, with adjustment and change in route of administration as indicated. The violently disturbed received 100 or 200 mg. intravenously, twice daily for 3 to 6 days; others, 50 mg. intramuscularly twice a day for 3 days. On control of behavior abnormalities, medication

¹ Kings Park State Hosp., Kings Park, L. I., New York.

² Promazine hydrochloride is available as Sparine from Wyeth Laboratories.

was continued by mouth in doses of 100 to 500 mg. three times daily. Blood counts, serum bilirubin and serum alkaline phosphatase tests were performed at the start and at about monthly intervals throughout treatment.

Since no precise methods exist for screening the effects of the ataraxics in the human, conclusions were based, *not on statistical calculations*, but on evaluation of the clinical responses obtained.

Promazine medication: 1. Reduced violence, combativeness and overactivity; and alleviated insomnia, even in the aged and arteriosclerotic. 2. Controlled anxiety, irritability and emotional tension in interpersonal relationships. 3. Acute hallucinations and delusions usually were relieved in a few days; fixed paranoid delusional ideation, however, generally remained unaffected. Patient with distortions in sense perception of fairly recent onset showed improvement earlier than did those in the more chronic cases (two years duration or more). 4. Withdrawn but intellectually preserved patients became less constrained and capable of freer verbalization. 5. The negativistic and catatonic occasionally exhibited progress. 6. Deeply regressed, severely disturbed or vegetative patients also showed some improvement, particularly in bladder and bowel control. 7. Capacity for readjustment was seldom increased in the nonviolent or moderately de-

teriorated with impoverishment of initiative; apathy and defectiveness in judgment were little altered. 8. All tended to relapse or regress soon after medication was stopped or reduced.

About 19% (37 patients) have been released; only 2 (alcoholics) have returned in the subsequent 3 to 10 months. About 21% (41 patients) have shown such sustained improvement that they have been transferred to open wards, received maximum privileges and been assigned to work. One third of this group (14 patients) now receive no medication; the rest are maintained on 100 to 300 mg. daily. Of the total series, 3% (6 patients) regressed after initial improvement on 1.5 mg. daily; later, 4 of these improved and tolerated reduction of daily dosage to 600 mg.

No convulsions or other untoward effects have developed, and no signs of habituation, even in the alcoholics.

Promazine significantly alleviates the secondary symptoms of the psychoses and permits greater amenability to psychotherapy. A larger percentage of the chronically psychotic are showing improvement; there is less destructiveness and need of mechanical restraint. A protective environment is still necessary, however, in advanced cases. Further experience is required to determine the long term stability and capacity for adjustment of ataraxic-treated out patients.

ELECTROSHOCK TECHNIQUE

DAVID R. HAWKINS, M.D.¹

The continuous publication of articles describing ECT procedures indicates that there is constant interest in evolving the simplest and safest technique for administering a treatment which has been widely used for over 20 years. The author wishes to describe an ECT technique which has resulted in no clinically observable complications in over 3,000 treatments, and which seems applicable in either hospital or office practice for the routine patient.

One tablet of Meprobamate is given to the patient one hour before treatment to re-

duce pre-shock fear and post-shock excitement or confusion. After the electrodes are in place, 15 to 25 mg. of succinylcholine is rapidly injected. The dosage varies with the patient's weight and response to the initial trial dose of 15 mg. After approximately 25 to 30 seconds the patient begins to show muscular fasciculations and early respiratory discomfort and, at this specific point, the grand mal stimulus is applied. In this way the patient recalls no discomfort nor is there a necessity for administering oxygen or other respiratory assistance. The convulsion which ensues is sufficiently attenuated to eliminate fractures as only $\frac{1}{4}$ to

¹ Supervising Psychiatrist, 2 West 13th St., New York, N. Y.

↓ reduction of muscular power is required to achieve that end. The therapist keeps the patient's jaw closed during the convulsion. No one else is allowed to touch the patient, and no other restraining measures are employed as the application of extrinsic force to a dynamically balanced musculo-skeletal system of forces is unnecessary and may cause a fracture. The rationale is revealed by a study of the statics and dynamics involved in the action of muscle-powered levers acting at varying angles across joints. Oxygen is occasionally used during the post-convulsive period of apnoea, but other adjuvant measures are not employed.

The entire treatment is given by the therapist himself, so that an assistant stands by primarily as a precautionary measure. The use of a petit mal shock as an anesthetic to cover the unpleasant subjective effect of the muscular paralysis (as suggested by Impastato) has resulted in a few unexpected

grand mal seizures in patients with a low convulsive threshold. The latter technic, however, is valuable when a greater degree of muscular relaxation is required than is necessary with the routine patient.

It appears that succinylcholine may be used routinely with relative impunity if it is utilized to achieve only that partial degree of muscular paralysis necessary to eliminate fractures and reduce the cardio-vascular stress inherent in unmodified grand mal convulsions. Experience with the above method indicates that the use of adjuvant drugs and other ancillary measures can be safely eliminated.

BIBLIOGRAPHY

1. Edwards, A. T., and Listwan, I. A.: *Am. J. Psychiat.*, **114**: 76, 1957.
2. Impastato, D. J.: *Am. J. Psychiat.*, **113**: 461, 1956.
3. King, P. J.: *Am. J. Psychiat.*, **114**: 555, 1957.

FURTHER EXPERIENCES WITH ELECTROSHOCK THERAPY MODIFIED BY ANECTINE®

CHARLES SALTZMAN, M.D., WILLIAM KONIKOV, M.D., AND RUTH P. RELYEA, R.N.¹

We have previously reported our experiences in the use of Anectine in 7,500 electroshock treatments(1). At that time we reported no fatalities, no fractures, and no serious medical complications. Subsequently, we reported on 17,000 treatments with no complications(2). At Bournewood and Valleyhead hospitals the staff and visiting psychiatrists have continued the routine use of an intravenous barbiturate, Anectine, and oxygen using essentially the same technique, and we can now report on 38,000 treatments. In this series there have been no fractures, no fatalities, and no serious medical complications.

The technique can be described briefly. A nurse anesthetist assists at all treatments. The patients are without breakfast and are given atropine 1/75 gr. ½ hour before treatment. At the time of the treatment dentures are removed, the patient lies on an ordinary

bed with a flat pillow under the head. About 10 cc. of an intravenous barbiturate, 2% solution, is administered, then 40 to 80 mgs. of Anectine is given rapidly. Oxygen under positive pressure is started immediately. The electric shock is given approximately 60 seconds following the Anectine. Oxygen is continued throughout the seizure and following the seizure until normal respiration is established. The patient is then turned on his side with sideboards on the bed.

Various authors(3, 4, 5, 6), while advocating modified treatment, have criticized the use of intravenous barbiturates and have also used only minimal doses of Anectine. They are apparently concerned about laryngeal spasm and apnoea. We can only point out that in 38,000 treatments using intravenous barbiturates and adequate doses of Anectine we have had no laryngeal spasm and no serious complications. We, of course, realize that laryngeal spasm can occur, and that there can be mechanical obstruction due to a large tongue or increased moisture, and

®Anectine is Burroughs Wellcome brand of succinylcholine chloride.

¹ Bournewood, 300 South St., Brookline, Mass.

therefore, do state that there be an individual trained in anesthetic procedures assisting at the treatment at all times. The authors of this paper fully agree with S. V. Marshall(7) of Australia in his criticism of American Psychiatry on this score, and suggest that his letter be read by all interested in this problem.

We have encountered occasional patients who are sensitive to barbiturates as manifested by a rash or by post-treatment excitement. In these patients we have used nitrous oxide for anesthesia instead of barbiturates with satisfactory results.

On two occasions we have had to discontinue EST because of untoward reactions. The first patient was a 50-year-old woman with a history of a previous coronary episode. Immediately following the eighth treatment she showed evidence of moderate pulmonary edema as manifested by dyspnea and moist basal rales. She recovered with no residual affects, but no further EST was given. The second patient was a 69-year-old man who had some vascular collapse and remained apnoeic and somewhat cyanotic for an hour following treatment de-

spite oxygen being administered with a patent airway. He, however, recovered uneventfully, but no further EST was given.

In summary, we have now given 38,000 treatments using an intravenous barbiturate and adequate doses of Anectine with no fractures or any other orthopedic complications, and no fatalities, and with no serious medical complications. The average dose of Anectine has been 60 mg. Oxygen under positive pressure, administered by a nurse anesthetist, is used in every treatment. We believe that this method of treatment, when administered by trained personnel, is safe and should be used routinely.

BIBLIOGRAPHY

1. Saltzman, C., Konikov, W., and Relyea, R. P.: *Dis. Nerv. Sys.*, 16: 153, 1955.
2. Saltzman, C.: *Am. J. Psychiat.*, 112: 78, 1956.
3. Impastato, D. J.: *Am. J. Psychiat.*, 113: 461, 1956.
4. Edwards, A. T., and Listwan, I. A.: *Am. J. Psychiat.*, 114: 76, 1957.
5. Kalinowsky, L. B.: *Am. J. Psychiat.*, 112: 745, 1956.
6. Robie, T. R.: *Am. J. Psychiat.*, 111: 549, 1955.
7. Marshall, S. V.: *Am. J. Psychiat.*, 114: 77, 1957.

DARTAL: A CLINICAL APPRAISAL

FRANK P. MATHEWS, M.D.¹

In 1956, Hambourger, Hemmer and Calhoun(1), of the G. D. Searle and Company, conducted a study on dogs of the comparative tranquilizing properties of chlorpromazine, and 8 related compounds. These latter had been synthesized by Cusic, Hamilton, and Lourie, of the same organization. Miosis, relaxation of nictitating membrane, and development of ataxia were objective criteria of full drug effect. The most active compound thus revealed was thiopropazate, 1-(2-acetoxyethyl)-4-13-(2-chloro-10-phenothiazine) propyl 1 piperazine dihydrochloride. Routine toxicity studies on various test animals indicated that clinical trials on human beings should prove to be relatively safe.

A test supply of this drug, known first as

SC 7105, and now as Dartal, was given Western State Hospital in July 1956, for clinical trial. Not knowing just what effects to expect, the drug was tried at random on a rather wide diagnostic spectrum, first in the male and female hospital wards, later on reception, psychiatric active treatment, and "back" wards. The following rough appraisal of its symptomatic therapeutic effects in 117 cases was arrived at after at least a week of administration of the drug; no other specific psychiatric treatment is included in this series, save general hospital routine. Opinion of at least 2 psychiatrically trained observers forms the basis for conclusions regarding therapeutic effect. Fifty men and 67 women were treated, in ages ranging from 13 to 92. Minimum observed time on drug, 8 days; maximum, 14 months; dosage range

¹ Western State Hospital, Fort Steilacoom, Wash.

from 20 to 160 mg. daily, (40 mg. average, in 4 doses). All dosage was oral.

Diagnosis	Clinical Appraisal of Results		
	Improved	Unimproved	Worse
Acute schizophrenia			
Paranoid type	3	—	—
Catatonic type	4	—	—
Undifferentiated	5	—	—
Schizo-affective type	1	—	—
Chronic schizophrenia			
Paranoid type	2	4	—
Catatonic type	1	1	—
Hebephrenic type	2	—	—
Undifferentiated	4	1	—
Manic-depressive psychoses			
Manic phase	13	1	—
Depressive phase	2	1	—
Involuntal psychoses	2	2	—
Psychosis with syphilis			
Meningo-encephalitis (paresis)	5	—	—
Psychosis:			
1. Due to alcohol	5	1	—
2. Due to barbiturate addiction	7	1	—
3. With cerebral arteriosclerosis	16	1	—
4. With other disturbances of circulation:			
a. Congestive heart failure	4	—	—
b. Myocardial infarction	3	—	—
c. Rheumatic heart disease	2	—	—
d. Interventricular septal defect	1	—	—
e. Multiple CVA	—	—	1
5. Due to epilepsy	—	1	—
6. Due to Huntington's chorea	9	1	—
7. Due to cardiospasm	1	—	—
Senile psychosis	5	1	—
Psychosis with psychopathic personality	—	—	1
Psychoneurosis with anxiety state	—	1	1
Total	97	17	3

At first glance at this table, it would appear that Dartal had indications almost identical with those of the other phenothiazine tranquilizers. However, one special action stands out, that of promoting a marked suppression of the involuntary muscular activity in 10 of 11 cases of Huntington's chorea. Pre- and post-treatment motion pictures in 8 of these cases clearly demonstrate this effect.

Many more patients have been treated by Dartal at this hospital than are included in this survey. In 19 months, 384,000 mg. have been consumed by an estimated 170 patients. No allergic rashes, no hypotensive reactions, no jaundice, and no agranulocytosis have been observed. A pseudo-Parkinsonism can be produced in almost any patient, if the dose is pushed beyond a certain point, usually 80 mg. per day. This symptom particularly affected the muscles of the face, causing drooling in several patients. Sternal marrow biopsies were secured on 12 patients after 4 to 6 weeks of treatment (40 mg. per day), and submitted to Dr. Q. B. De Marsh of Seattle for study; no evidence of marrow function impairment was found. Before and after treatment electroencephalograms were run on one schizophrenic and two normal controls. Dr. M. E. Kennard reports the only changes in these tracings were non-specific ones associated with general muscle relaxation on the drug. Nine diabetics, 7 severe cardiacs, 2 cirrhotics, and 2 cases of active chlorpromazine jaundice were treated with Dartal, with no evidence of exacerbation of the organic disease. Four deaths occurred among the 117 observed cases, while being treated. Autopsies on 2 of these (both cardiac deaths) are reported by Dr. J. A. Sheppard to show no gross or microscopic evidence of liver, kidney or bone marrow intoxication.

As compared with chlorpromazine, Dartal has the following characteristics: 1. its effective tranquilizing dose, weight for weight, for human beings, is about one-third; 2. it has a narrower dosage range, pseudo-Parkinsonism being more easily produced; 3. orally, its full therapeutic effect can be expected more promptly; 4. it is almost devoid of toxic effects; 5. the indications for the two drugs are almost identical; 6. Dartal seems to have a specific sedative effect in Huntington's chorea.

BIBLIOGRAPHY

1. Hambourger, W. E., Hemmer, Miriam, and Calhoun, David W.: Study in Dogs of the Tranquilizing Action of Nine Chlorphenothiazine Derivatives. 1956. (Unpublished communication from G. D. Searle and Co.)

IPRONIAZID (MARSILID): ITS USE IN OFFICE TREATMENT OF DEPRESSION

WILSON G. SCANLON, M.D., AND WILLIAM M. WHITE, M.D.¹

Ayd(1) recently pointed out the complications in the use of iproniazid. The following report concerns how these complications can be reduced by employing a technique comparable to digitalization. Following "Marsilidization," iproniazid in appropriate maintenance dosages has been demonstrated to be a valuable drug in the office management of depressed patients.

Detailed records and follow-up reports were obtained on 40 patients (25 females, 15 males—ranging in age from 20 to 78) in whom depression was the prominent clinical feature. Iproniazid (with 25 mg. of Pyridoxine at each dosage to avoid previously reported neuritides resulting from excessive loss of vitamin B₆ in patients taking the drug) was administered orally in an initial dose of 50 mg. t.i.d. until distinct clinical improvement of the depression was observed, or until intolerable complications necessitated reduction. In only 3 patients (2 males [hypotension] and 1 female [dermatitis]) did side-effects preclude use of iproniazid. All 37 patients who received the drug for a month or more had improved mood, increased appetite, more energy and a sense of well being. Ayd found improvement in only 24 of the 50 patients treated with iproniazid and side effects forced discontinuance of the drug in 11 of his patients.

Before minimal effective dosage was established, 1 male experienced hyperhidrosis and sexual impotency; 5 females developed dependent edema; 1 female reacted with a generalized dermatitis prior to 3 weeks; 2 suicidal females, ages 68 and 48, required 2 and 4 ECTs respectively; and all the patients evidenced postural hypotension. Three patients (2 females and 1 male), all with vascular hypertension, developed postural hypotension of a degree that brought about loss of consciousness.

POSTURAL HYPOTENSION

Since postural hypotension is the one general side-effect demanding constant medical

vigilance, the recumbent and standing blood pressure norms should be established before beginning administration of iproniazid. Blood pressure recordings should then be made at least every other day until the patient notes the prodromes of postural hypotension. Empirically, one learns to lower the dosage slowly or rapidly, the criteria being pre-treatment vascular hypertension, number of days before hypotension appears, abruptness of blood pressure decline, age, and the patient's judgment and reliability in following medical instruction.

It was also noted that prior to establishment of the minimal maintenance dosage the hazard of syncope from postural hypotension is increased with strenuous physical exertion, alcoholic beverages, heavy and hurried eating, and the ingestion of barbiturates.

Adrenalin and Ephedrine are not effective in combating the postural hypotension. Dexedrine Sulfate does act successfully as a hypertensive, and the patient should have ten 5 mg. tablets available to be used whenever syncope threatens. Thirty-five mg. of Dexedrine Sulfate in a 14-hour period were required by 1 patient to continue ambulation and avoid fainting. Dexedrine should not, however, be routinely administered with iproniazid since it may mask a developing hypotension.

HYPERHIDROSIS

Hyperhidrosis complicated 1 case. Iproniazid was continued at 100 mg. a day for 3 days after there were clear evidences of hypotension from the preceding dose of 150 mg. a day for 33 days. Increased sensitivity to heat with pruritis and hyperhidrosis persisted for 48 hours following cessation of the drug. Dexedrine Sulfate in large doses (10 to 15 mg.) did not relieve these symptoms even though it alleviated the syncope. It is assumed hyperhidrosis and pruritis indicate a high level of iproniazid in the blood and spinal fluid and thus warn of a developing hazardous hypotension.

¹ Silver Hill Foundation for the Treatment of the Psychoneuroses, New Canaan, Conn.

SEXUAL IMPOTENCY

Complete sexual impotency commenced in 1 male 2 weeks after iproniazid had been started and prior to the onset of hypotension. The impotency persisted for 2 weeks after iproniazid had been temporarily discontinued. It reappeared briefly 2 weeks after resumption of the drug at 50 mg. a day, and subsided with maintenance on 25 mg.

NEURITIS

A peripheral neuritis was observed in 1 female patient. Iproniazid therapy had been instituted elsewhere without Pyridoxine. With its addition, the neuritis disappeared.

EDEMA

Pitting edema of the lower extremities usually disappeared spontaneously with reduction of the iproniazid to a maintenance dose. Before that, Diamox meliorated the edema sufficiently to reassure the cosmetically anxious patient.

DOSAGE

1. The minimal effective maintenance dose is usually from 25 to 50 mg. a day and may be as low as 12½ mg. every second to third day. In the majority of patients, this dosage does not produce significant postural hypotension and/or other side effects.

2. It is prudent to initiate treatment with 25 mg. t.i.d. in any individual over 45 years of age who has elevated blood pressure.

3. With evidence of developing postural hypotension in an individual with a previously elevated blood pressure, the dosage should be reduced by at least one-half.

Should the recumbent blood pressure recording continue to fall and show marked change with the assumption of the standing position, the drug should be discontinued until the blood pressure has returned to a level that does not produce feelings of faintness.

4. In the ambulatory office patient who is distant from medical supervision, 50 mg. of iproniazid a day is adequate as a starting dose. If, after 1 month, there is no improvement and there are no complications, the daily dose may be increased by 10 mg. every week.

5. If the patient is seen daily by the physician, 50 mg. t.i.d. initially will produce "Marsilidization" and thus hasten improvement, but annoying side-effects are more apt to occur and complicate patient management. A rare individual may have postural hypotension on a maintenance dose of 12½ mg. every 4 to 5 days.

CONCLUSIONS

1. Judicious management of the iproniazid dosage and of the patient's activities so as to prevent syncope, makes usage of the drug safer, avoids the majority of reported adverse side-effects, and still provides the blood stream and spinal fluid with a sufficient titer to produce a salutary effect on mood.

2. It is our impression that iproniazid is most effective and produces fewer side-effects in cases of uncomplicated depression.

3. The rapid and sustained response of the patients who required ECT suggests that ECT and iproniazid are synergistic.

BIBLIOGRAPHY

1. Ayd, F. J., Jr.: *Am. J. Psychiat.*, **114**: 459, 1957.

ENQUIRY vs. BELIEF

If it is better to travel than to arrive, it is because traveling is a constant arriving, while arrival that precludes further traveling is most easily attained by going to sleep or dying.

—JOHN DEWEY

(*Human Nature and Conduct*)

A FURTHER NOTE ON THE MECHANISM OF THE ANTIDOTAL ACTION OF SODIUM SUCCINATE IN THE Mescaline PSYCHOSIS¹

IAN STEVENSON, M.D.,² AND L. C. MOKRASCH, PH.D.³

INTRODUCTION

In a previous article(1) we reported confirmation of the antidotal effect of sodium succinate in the mescaline psychosis which Schueler(2) had first described. Delay, *et al.* (3) have reported that prior injections of sodium succinate protect mice from otherwise fatal injections of mescaline. Arnold and Hofmann(4) observed an antidotal action of sodium succinate against the effects of LSD-25 and Trautner(5) has also observed the antidotal action of sodium succinate in the mescaline psychosis.

In our earlier paper we left open the question of how sodium succinate exerts its antidotal action in the mescaline psychosis. We have made some additional observations which bear on this.

METHODS

During studies on the metabolism of mescaline reported fully elsewhere(6), we administered sodium succinate to 8 additional subjects in doses ranging from 14 to 25 gms. i.v. and according to the method previously described(1). Five subjects experienced the mescaline psychosis twice, receiving sodium succinate on one of the two days only. Two subjects had only one mescaline intoxication, each receiving succinate on that occasion. An eighth subject received sodium succinate one day and sodium bicarbonate in equivalent amount on his second day. A ninth subject received sodium bicarbonate one day and nothing on his second day.

¹ This work was supported by a grant from the Scottish Rite Schizophrenia Research Committee of the National Association for Mental Health.

² Present address: Dept. of Neurology and Psychiatry, School of Medicine, University of Virginia, Charlottesville, Va.

³ Present address: Medical Center, University of Kansas, Kansas City 12, Kansas.

The authors gratefully acknowledge the helpful counsel of Professors Ernest Bueding and Fred Braza of the Louisiana State University School of Medicine where this work was carried out.

During these experiments we measured: pH of the blood, amount of mescaline and trimethoxyphenylacetic acid in the blood; volume of urine; amount of mescaline and trimethoxyphenylacetic acid excreted in the urine. In a few instances we measured urinary excretion of sodium succinate. Experimental periods extended over 8 to 10 hours. Mescaline was estimated by the Zeissel method for methoxy groups(7) and succinate by a paper chromatographic method.

RESULTS

We again observed a definite, although usually rather mild and transient antidotal action of the sodium succinate on the symptoms of the mescaline intoxication. And we again noticed no shortening of the total duration of the mescaline effects.

The two subjects to whom sodium bicarbonate was administered did not notice any significant changes in their symptoms.

We found the antidotal action of sodium succinate was not accompanied by a. increased urinary excretion of mescaline after the succinate was given; b. increased breakdown of mescaline to trimethoxyphenylacetic acid; c. decreased blood levels of mescaline (compared with levels just before the administration of sodium succinate or on days on which no sodium succinate was given); d. significant changes in the volume of urine excreted after the administration of sodium succinate; e. changes in the pH of the blood after sodium succinate (although the urine did become strongly alkaline). The urinary excretion of succinate did not increase significantly after the administration of succinate in the two experiments in which this was measured.

DISCUSSION

We measured the pH of the blood in all subjects and administered sodium bicarbon-

ate to two subjects to test the possibility that the antidotal effect of sodium succinate is due to the production of an alkalosis. Barrett(8) found no antidotal action in barbiturate depression comparable to that of sodium succinate with the administration of comparable amounts of an alkalizing solution of racemic sodium lactate. Our failure to find changes in the blood pH or any antidotal effect from equivalent amounts of sodium bicarbonate further negates the hypothesis that the effect of sodium succinate is due to alkalosis. Likewise our failure to relate succinate effects with significant changes in urine volume makes it unlikely that the antidotal effects depend upon a diuresis, although DeBoer(9) has proposed this explanation and adduced some evidence in favor of it.

Our results also render improbable our being able to explain the sodium succinate effect as due to changes in the metabolism of mescaline, at least insofar as these are reflected in the blood and urine.

Quastel and Wheatley(10) and subsequently Schueler(2) demonstrated that succinate could act as a substrate for oxidation in nervous tissue in the presence of mescaline which depressed oxidation when glucose, lactate or pyruvate formed the substrate. Adams, *et al.*(11) have shown that sodium

succinate augments the amidation of glutamic acid in patients with multiple sclerosis. Since amidation is one means by which the body disposes of ammonia, and since the breakdown of mescaline includes its deamination to trimethoxyphenylacetic acid(6), sodium succinate may conceivably contribute to the acceleration of this process.

BIBLIOGRAPHY

1. Stevenson, I., and Sanchez, A. J., Jr.: *Am. J. Psychiat.* (in press).
2. Schueler, F. W.: *J. Lab. & Clin. Med.*, **33**: 1297, 1948.
3. Delay, J., Gerard, H. P., and Thullier, J.: *Compt. rendu. Soc. Biol.*, **144**: 163, 1950.
4. Arnold, O. H., and Hofmann, G.: *Wiener Ztschr. Nervenheilkunde u. deren Grenzgebiete*, **11**: 92, 1955.
5. Trautner, E. M.: Dept of Physiology, Melbourne University, Melbourne, Australia. Personal Communication.
6. Mokrasch, L. C., and Stevenson, I.: *The Metabolism of Mescaline*. (In preparation)
7. Zeissel: *J. Assoc. Off. Agri. Chemists*, **22**: 100, 1939.
8. Barrett, R. H.: *Anesthes. & Analges.*, **26**: 74, 195, 1947.
9. DeBoer, B.: *J. Pharmacol. & Exper. Therap.*, **88**: 366, 1946.
10. Quastel, J. H., and Wheatley, A. H. H.: *Biochem. J.*, **27**: 1609, 1933.
11. Adams, J. E., Harper, H. A., Gordan, G. S., Hutchin, M., and Bentinck, R. C.: *Neurology*, **5**: 100, 1955.

AEROPHOBIA

Some are as much afraid of fresh air as persons in the hydrophobia are of fresh water. I myself had formerly this prejudice, this aerophobia, as I now account it. And dreading the supposed dangerous effects of cool air, I considered it as an enemy and closed with extreme care every crevice in the rooms I inhabited. Experience has convinced me of my error. I now look upon fresh air as a friend; I even sleep with an open window. I am persuaded that no common air from without is so unwholesome as the air within a close room that has been often breathed and not changed. . . . And I find it of importance to the happiness of life, the being freed from vain terrors, especially of objects that we are every day exposed inevitably to meet with. . . . It is to be hoped that in another century or two we may all find out, that it [fresh air] is not bad even for people in health.

—BENJAMIN FRANKLIN

CASE REPORTS

HIGH DOSAGE CHLORPROMAZINE THERAPY AFTER PREVIOUS AGRANULOCYTOSIS

M. G. JACOBY, M. B., B. S.¹

The following case is interesting because of the unusually high dosage of chlorpromazine administered after two previous attacks of agranulocytosis.

The patient, a 38-year-old, paranoid schizophrenic, was first hospitalized in 1942. She received insulin coma therapy in 1943, 1944 and 1945. The patient has now been continually hospitalized for 13 years and has been disturbed, resistive, dirty, aggressive, hallucinating and preoccupied. She has received electro-convulsive therapy on many occasions but showed little response.

In 1952 the patient commenced to have grand mal seizures. She had a generalized abnormal electroencephalogram. Patient was started on phenobarbital gr. 1, q.i.d.; and dilantin grs. 1½ q.i.d. which controlled the fits.

In 1954 a bilateral transorbital leucotomy was performed. In March, 1957 after receiving 400 mg. chlorpromazine daily for 3 months, she developed agranulocytosis—WBC 1,500; P—2; L—94; M—4. In January, 1956 she was again placed on chlorpromazine 50 mg. t.i.d. and 10 days later she again developed agranulocytosis—WBC 1,600; P—0; L—99; M—1. Promazine 250 mg. q.i.d. and phenothiazine hydrochloride 50 mg. q.i.d. did not help her, and in June, 1957 a pre-frontal lobotomy was performed.

After the lobotomy, patient was given promazine, increasing the dose until promazine 800 mg. q.i.d. was being given. She still could not be controlled. August 6th, 1957 she was placed on chlorpromazine 800 mg. q.i.d., increasing until, 6 weeks later, she was receiving 1,600 mg. q.i.d.—a total of 6,400 mg. daily, with phenobarbital gr. 1, q.i.d., and dilantin grs. 1½ q.i.d. Parkinsonism was relieved by kemadrin 20 mg. q.i.d., and atropine gr. 1/100 q.i.d.

She showed a marked improvement and by the beginning of November, 1957, 2

TABLE 1

CHLORPROMAZINE PLASMA LEVELS

Chlorpromazine 1600 mg. qid.—9 a.m.; 1 p.m.; 5 p.m.; and 9 p.m.

Time of sampling relative to medication	Free chlorpromazine ug./ml. plasma	Bound chlorpromazine ug./ml. plasma	Total chlorpromazine ug./ml. plasma
12 hrs. after last dose previous day	3.8	1.2	5.0
1 hr. after 1st dose. .	5.7	1.4	7.1
1 hr. after 2nd dose. .	5.6	1.6	7.2

months after receiving chlorpromazine 6,400 mg. daily she was pleasant, cooperative and enjoyed social activities. She denied delusions and hallucinations and would start a conversation with the doctor or ward personnel, although she was markedly underactive. She wrote to her family twice weekly on her own initiative. Her face was still expressionless and she showed a minimal muscular rigidity. She still became annoyed at slight provocation.

Blood counts, bone marrow, cephalin flocculation tests and alkaline phosphatase were all within normal limits.

On December 4, 1957 patient had a hypotensive faint following which her chlorpromazine was reduced to 1,000 mg. q.i.d. The dosage was gradually reduced and by the 21st of December she was receiving 500 mg. q.i.d. She then became more aggressive and dosage has again gradually been returned to the original dosage of 6,400 mg. a day.

SUMMARY

A case of a patient who was treated with 6,400 mg. chlorpromazine daily, in spite of two previous attacks of agranulocytosis, is presented.

ACKNOWLEDGEMENT

I wish to express my thanks to Dr. Edward J. Van Loon, of Smith, Kline & French Laboratories, for performing the estimation of plasma chlorpromazine.

¹ Central Islip State Hosp., Central Islip, N. Y.

MENTAL DEPRESSION ASSOCIATED WITH HYPERADRENOCORTICISM

WILLIAM E. OLSON, M. D.¹ AND GEORGE A. HIGGINS, M. D.¹

Although there is a generally consistent clinical picture among patients with Cushing's Syndrome, not all of the various manifestations of the disease are to be found in each individual case. Indeed, as Cope *et al.* (1) point out, even the outstanding features of the syndrome are inconstant. Such a variable pattern should be anticipated when one considers the multiplicity and complexity of the steroids elaborated by the adrenal cortex. One of the least emphasized manifestations of Cushing's Syndrome is the psychological change often observed in these patients. For the most part this change consists of minor emotional disturbances, but cases have been reported in which the psychiatric symptoms reached psychotic proportions (1, 2, 3). The dangers of severe mental and emotional changes developing in patients receiving ACTH and cortisone have been documented well (3, 4, 5, 6). It seems probable, therefore, that the psychotic manifestations observed in the case here presented were the result of abnormalities in the complex pattern of adrenal steroid biochemistry, although this kind of causal relationship is difficult to prove.

This case is being reported because of the unusual clinical picture including, as it does, some of the less obvious manifestations of adrenal cortical hyperfunction without the more common overt signs of Cushing's Syndrome. Moreover, electroshock therapy seemed indicated in view of the presenting symptoms but the results from such therapy could have been disastrous. The case brings out the necessity for a thorough study of the physical condition of each patient prior to the administration of psychiatric somatic therapies in order to prevent the morbidity and the mortality which can result from such modalities of treatment. The surgical aspects of this case have been reported elsewhere (7).

A 38-year-old white male, World War II veteran, farmer and truck driver was admitted to psychiatry

on September 3, 1955, because of severe mental depression and suicidal tendencies. He was tearful, sad, worrisome, self-deprecating, and he expressed a feeling of hopelessness in his general outlook. The depression was considered to be of psychotic proportions and was seriously hampering his life adjustment. He described weakness, easy fatigability and loss of sexual power. The duration of his symptoms was approximately one year.

A review of the family history indicated that the maternal grandfather had died at a state mental hospital in 1935. The veteran's mother received electroshock therapy for depression in 1945. A paternal uncle had died by suicide.

The past personal history included an appendectomy for ruptured appendix at age 13. He graduated from high school at 16 and made better than average grades. He adjusted well to U.S. Coast Guard service for 4½ years though he relates experiencing inordinate nervousness and apprehension during routine inspections. All of his civilian employment has been at jobs well below his intellectual capabilities. He was married in 1945 and has 2 children in good health.

The general physical examination was not remarkable. He appeared to be in robust general health. He described a recent slight weight loss. None of the usual signs of Cushing's Syndrome were evident. BP 120/80.

X-ray examination of the spine preparatory to EST revealed marked generalized osteoporosis with some evidence of compression of D-7 and D-8.

Serum calcium, phosphorous and alkaline phosphatase levels were within normal limits. Urinary Sulkowitch tests revealed increased calcium excretion. The glucose tolerance curve was of a mild diabetic type. The total circulating eosinophile count was depressed to 2 per cu.mm. Urinary 17-Ketosteroid excretion levels were normal. Urinary 11-Oxysteroid excretion levels were markedly elevated, being 11 mg.; 16.2 mg. and 18.4 mg. in 24 hrs. on 3 determinations in two different laboratories. Intravenous urography with simultaneous retroperitoneal oxygen studies did not demonstrate an adrenal tumor.

Despite the absence of signs of Cushing's Syndrome, a diagnosis of hyperadrenocorticism was made and surgical exploration was recommended. Surgery was performed on December 7, 1955, using bilateral subdiaphragmatic incisions with removal of the 12th rib on each side. Both adrenals were found to be normal in size and position and with no apparent tumor. Some nodularity of the left gland was noted. A subtotal adrenalectomy was performed, with total removal of the left gland and 80% of the right gland. Weight of the left gland was 5.6 gm. and the removed portion of the right, 3.1 gm. Pathologic study was reported as showing hyperplasia without hypertrophy of the cortex and with cortical nodules bilaterally.

¹From the Veterans Administration Hospital, Kansas City, Missouri, and the University of Kansas City, Kansas.

The post-operative course was essentially uneventful. Discharge from hospital occurred on February 8, 1956, with apparent recovery from the depression. During follow-up studies in May 1956, February 1957, and August 1957, the patient reported feeling well and being regularly employed. Some complaints of general weakness have been persistent.

Post-hospital laboratory studies have been within normal limits. The urinary 11-Oxysteroid excretion levels have been as follows: 1.3 mg. in 24 hrs. on 12/13/55; 2.1 mg. on 2/5/57; and 1.1 mg. on 8/8/57. Total circulating eosinophile determinations were 180 per cu.mm. on 12/15/55; 282 per cu.mm. on 5/9/56; and 108 per cu.mm. on 8/8/57. X-rays of the spine continue to show osteoporosis. There has been a weight gain of more than 20 pounds since the hospital admission date. Further observational studies will continue.

The patient's response to psychotherapy provided some interesting sidelights on the psychophysiological relationships. When it became evident that we were not getting a favorable response from the adjunctive therapy program and that ECT could not be utilized, we felt that individual psychotherapy should be attempted. The patient was seen once a week, the immediate goal being the establishment of the kind of treatment relationship which would enable him to look upon the therapist as a source of support in his current emotional crisis. During the early sessions there were manifestations of

depression and of passive-aggressive behavior: whining, self-justification, hypercritical attitude toward examinations and treatment procedures. He gradually responded to treatment by attenuating the passive-aggressive measures and by attempting to involve himself in the adjunctive therapy program. His complaints of weakness and tiredness continued as did the feeling that the hospital methods were not calculated to improve his condition. He became more hopeful after he accepted proposed surgery and continued to improve in mood after surgery was completed.

Psychological examinations conducted a year and a year and a half after discharge have demonstrated maintained emotional stability.

BIBLIOGRAPHY

1. Cope, O., and Baker, J. W.: *J. Med.* 253: 119, July 28, 1955.
2. Wilkins, L., Gardner, L. I., Crigler, J. F., Silverman, S. H., and Migeon, C. J.: *Clin. Endocrinol.* 12: 257, Mar. 1952.
3. Glaser, G. H.: *Psychosom. Med.*, 15: 280, July-Aug. 1953.
4. Goolker, P., and Schein, J.: *Psychosom. Med.*, 15: 589, Nov.-Dec. 1953.
5. Fox, Henry M., and Gifford, S.: *Psychosom. Med.*, 15: 614, Nov.-Dec. 1953.
6. Fox, Henry M.: *Psychological Responses to the Administration of ACTH and Cortisone, The Human Adrenal Cortex*, Boston, Little, Brown and Co., 1955, p. 594.
7. Higgins, G. A.: *Am. Surgeon*, 22: 904, Sept. 1956.

HYPNOTHERAPY FOR ACHALASIA OF THE ESOPHAGUS (CARDIOSPASM)

JEROME M. SCHNECK, M. D.¹

A 48-year-old patient requested hypnotherapy for cardiospasm of two years duration. He complained of dysphagia, eructation, regurgitation, lacrimation, and weight loss. Pain was often severe. Medications had not helped. One year previously, passage of a mercury-weighted tube brought brief relief followed by recurrence. Two esophageal

roentgenograms showed achalasia and dilatation.

The cause of cardiospasm is unknown. Cardioplasty and esophagogastricectomy are frowned upon and there is no general agreement on indications for surgery. A report on esophagomyotomy appeared recently (1). Forceful dilation has had varying success.

Initial hypnotherapeutic efforts were to allay anxiety and reduce general muscular tension. Some improvement resulted immediately. Then a conditioning technique was

¹ Clinical assistant professor of Psychiatry, State University of New York College of Medicine at New York City; Address: 26 West 9 Street, New York 11, N. Y.

used in the form of a silent numerical count. The count was employed by the patient during a spasm or its onset to induce relaxation of the lower esophageal sphincter. It proved effective for considerable additional help. Spasm was hypnotically induced and relieved in relation to fantasied food ingestion under hypnotically accelerated time conditions. Direct correlation was present between use and omission of the hypnotic conditioning and the presence and degree of spasm, followed by more permanent change. Relief was very gratifying. The patient gained 15 pounds.

He submitted then to forceful dilation under surgical care after several weeks of daily esophageal washings. There was some change, followed by considerable relapse. The hypnotherapeutic benefit remained unaffected. Additional dilation was considered but the patient was hesitant. Multiple dilations are common.

Continuing in psychiatric treatment, he explored deep-seated personality problems. General benefit derived did not seem to affect minimal residual intermittent discomfort. Strong masochistic components were evident in his character structure. Hostility and dependency needs were excessive. A significant

sexual episode preceded the onset of cardio-spasm but its elucidation was not helpful.

Past history revealed deprivation of parental love. The patient, in turn, was limited in his capacities for deep affection. Sexual relationships were numerous and superficial. The cardiospasm suggested association with a pattern of rejecting in relation to food and its symbolic equivalents, but insights did not reinforce practical gains. He focussed on its possible self-punitive attributes without further results.

Gratifying response of this patient to hypnotherapy suggests desirability of further investigation of its use in achalasia of the esophagus, especially in early cases to forestall irreversible structural change, and prior to surgical procedures with their risk of complications, some of which may be extremely severe.

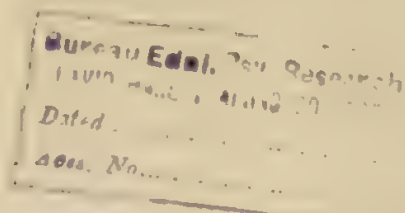
BIBLIOGRAPHY

1. Ellis, F. H., Jr., Olsen, A. M., Holman, C. B., and Code, C. F.: J.A.M.A., 166: 29, Jan. 4, 1958.
2. Schneck, J. M.: Hypnosis in Modern Medicine. Springfield: Charles C Thomas, 1953; Studies in Scientific Hypnosis, Baltimore: Williams and Wilkins, 1954.

AUTHORITY V. REASON

In discussion it is not so much weight of authority as force of argument that should be demanded. Indeed the authority of those who profess to teach is often a positive hindrance to those who desire to learn; they cease to employ their own judgment, and take what they perceive to be the verdict of their chosen master as settling the question. In fact I am not disposed to approve the practice traditionally ascribed to the Pythagoreans, who, when questioned as to the grounds of any assertion that they advanced in debate, are said to have been accustomed to reply "He himself said so," "he himself" being Pythagoras. So potent was an opinion already decided, making authority prevail unsupported by reason.

—CICERO,
de Natura Deorum



CORRESPONDENCE

PSYCHIATRIC IMPLICATIONS IN CANCER SURVIVAL

Editor, THE AMERICAN JOURNAL OF PSYCHIATRY:

SIR: Cancer feeds on ignorance and fear. Cancer strikes some half million Americans each year—"one out of four"—almost one a minute. "One out of four" usually means one *other* person out of four ('not me.')

Publicity campaigns and educational programs on the part of the American Medical Association and American Cancer Society have failed to persuade more than a few more people to consult their physicians as soon as signs of cancer develop. This material is carefully read mainly by persons who have already had some direct or indirect experience with cancer. At surgery approximately three-quarters of patients with visceral cancer have lymph node metastasis. The rate of cure drops from 75 to 20% for cancer of the breast, colon and rectum. It has been estimated that only half of the curable cancer cases are being cured. The rate among surgeons is said to be two-thirds the rate for non-surgeons.

Statistical study of the problem shows clearly that the weak spot in our attack lies in late diagnosis. With the diagnostic means now available cancer can be detected in a high percent of cases if the patient will notice and report rather indefinite symptoms and have routine physical examinations. If we continue to wait for the occurrence of cancer symptoms we will continue to operate on late cancers. Aversion to procedures such as rectal and vaginal examinations must be overcome both by doctors and patients. A more effective tool than surgery is badly needed, yet for most internal cancers there is nothing else to use and there may be nothing better for some time. Again fear and ignorance must be overcome. This fear was

justified when cancer operations carried a high mortality and before anesthesia was discovered.

The objection is frequently made that factual information about cancer symptoms will lead to widespread cancer phobia. The author is well aware of this problem from actual cases. However, cancer phobia can be treated successfully but late cancer cannot! The patient's concern for minimal symptoms should be accepted as not entirely unrealistic. Hypochondriacal patients are partly right. They make their lives and the lives of their family miserable but they do not overlook minimal symptoms which might indicate cancer. Psychiatrists should be careful to consider this possibility.

Formerly patients with tuberculosis were not given their diagnosis because it was thought that this would undermine their confidence in recovery. Evasion and subterfuge are anxiety provoking. Honesty is essential in the interpersonal relationship between psychiatrist and patient. Why should the non-psychiatrist deviate from this principle in dealing with cancer patients? One eminent surgeon answers the question, should the patient know the truth about cancer? "unconditionally yes." Perhaps certain psychiatric patients should be excepted. This surgeon has pioneered the planned re-operation of patients who are found to have positive lymph nodes, at the time of surgery. Obviously these patients must be told the truth if the surgeon is to have their cooperation for a "second look."

A final plea is made to the psychiatric profession to interest themselves personally and as a group in the cancer problem. Have you had a complete examination recently?

HERBERT D. ARCHIBALD, M. D.,
Oakland, Calif.

MURDER BY ADOLESCENTS

Editor, THE AMERICAN JOURNAL OF PSYCHIATRY:

SIR: Regarding "Murder by Adolescents with Obscure Motivation" by A. Warren Stearns, M. D., in the October JOURNAL, and the correspondence in the January number, the following comments seem appropriate.

Dr. Stearns' article on juvenile murderers emphasizes once more how little is known about the mentality of offenders. Psychiatrists study chiefly the patients they encounter in mental hospitals, clinics, and private practice. Few have the opportunity to observe offenders. With juvenile delinquency a nation-wide problem, surely we, as psychiatrists, should know more about it than we do. The impression prevails that many juvenile delinquents are not schizophrenic or psychopathic in the accepted sense of the term; however, to call them "antisocial" is unsatisfactory. The fact that we do not even have a satisfactory nosological terminology is indicative of our ignorance.

The Association for Psychiatric Treatment of Offenders [APTO] recently held a conference in New York City with Dr. Lauretta Bender, Dr. Ralph Brancale and myself as speakers, and several discussants who had also studied such patients. The dis-

cussion was based upon material from over 50 cases which the speakers had observed themselves. The chief impression shared by the participants was how little we knew on this important subject. Juvenile murderers seem to belong to many different types which must be differentiated carefully, to make prognosis and effective treatment possible.

In trying to arrange the conference, I was impressed that several well-known psychiatrists refused to speak because, although they had examined or treated juvenile murderers, they had learned so little that they did not feel justified in speaking. One outcome of the conference was agreement that there was a great need for an effort to collect adequate numbers of cases to allow generalization. In New York State, a number of juvenile murderers have been discharged from institutions after some years. These patients certainly should be followed psychiatrically with a view to obtaining the data without which the problem cannot be approached scientifically.

MELITTA SCHMIDBERG, M. D.,
Chairman, Executive
Committee, APTO,
9 East 97th St.,
New York 29, N. Y.

THE SUBJECTIVE

Thus the whole sensuous and intellectual furniture of the mind becomes a store whence I may fetch terms for the description of nature, and may compose the silly home-poetry in which I talk to myself about everything. All is a tale told, if not by an idiot, at least by a dreamer, but it is far from signifying nothing. Sensations are rapid dreams; perceptions are dreams sustained and developed at will; sciences are dreams abstracted, controlled, measured, and rendered scrupulously proportional to their occasions. Knowledge accordingly always remains a part of imagination in its terms and in its seat; yet by virtue of its origin and intent it becomes a memorial and a guide to the fortunes of man in nature.

—SANTAYANA

COMMENT

OBJECTIVITY IN PSYCHIATRY

By objectivity in psychiatry I mean the application of scientific methods to the problems of psychiatry, *i.e.*, to the understanding of mental illness. From such knowledge follows the ability to develop rational treatment. The scientific method involves the recognizable isolation of factors by independent observers, and units of measurement that are reproducible experiments, and the ability to predict from the factors.

Let us admit at the outset that we deal with the most complex of all phenomena which we know in the universe, the highest organization of anything we know, *viz.* the nervous system, and its product the human mind. In essaying an investigation, even a rudimentary knowledge of this complexity imposes upon the investigator extreme humility. And as with any intricate problem, we must simplify it and limit ourselves in order to make any progress. After the initial hard steps we may gradually extend the field by admitting new factors. The difficulty lies in choosing items that are not too elementary to be significant, but which are at the same time sufficiently simple to admit of scientific study.

Thus quantum mechanics would be too elementary, too much a basic property of matter, for specific relevancy; on the other hand, many subjective manifestations are too vague in their unresolved state, too complex for a successful study by available scientific methods.

If one speaks of objectivity in psychiatry he is almost immediately confronted with the argument that the essence of the psychic phenomena are subjective. I would go even further and agree with Descartes that the center of our living, the *sine qua non* of our being is subjective. But because the recognition of these subjective states is difficult or impossible either by the patient or by an observer, and because the description is oftener a description of a particular psychiatrist or describer, usually also involving an obscure interpretation by the particular

psychiatrist, such subjective descriptions are unsuitable for the requirements of science. Medical students do not know nor usually learn in four years how to make objective formulations; often no one except the student who makes the formulation can recognize the patient by his description. Unfortunately, in the U.S.A. it is possible to go through a psychiatric residency without performing a single piece of research or an experiment.

All this may sound trite and elementary, but the recognition of these principles is the first step, and the most difficult one, that the student of psychiatry has to take before he can make an objective, scientific study of the problems confronting him.

As is true with any difficult study, there is confusion initially; we are moving as it were in a dark woods where there is little light and no path, or perhaps where there are many faint trails but we do not know where they lead. Part of the confusion that exists in psychiatry arises from mistaking the requirements for investigation, or the obligations of the therapist who must work within a time limit, and must use the best available empirical means. Here the difference between science and practice should be acknowledged and respected. A reference to the history of science shows, for example that the *discovery* of calculus and underlying physical laws were made decades or centuries before their *use* in the construction of an aeroplane, of insulin by Best and Banting before its application to psychiatry. A recognition of what is scientific investigation and what is therapeutic obligation would remove much confusion from our field.

What are the criteria for a scientific discipline? 1. The items should be clearly defined and recognizable by separate, independent workers. 2. They should be obtainable by independent workers when the same situation is repeated. 3. Given the same factors, recognizable by different investigators, they should lead us to predict results

and happenings. If prediction is not possible, we have not an exact science, but only a history. Finally we should not accept dogma and authority for verifiable facts. Admiration for our prominent figures of science and psychiatry should not blind us so that we cannot see new facts and concepts.

Today there are many important and promising objective approaches to the study of psychiatry—biochemical, neurophysiological, genetic, pharmacological. Sometimes the work is retarded through the confusion of trying to fit the results into impossible dogmatic and rigid concepts, rather than to modify the concepts to fit facts.

In a short statement such as this it is not possible to review the success of the many fruitful though isolated investigations now going on in experimental psychiatry. To mention but one example of the success of the scientific analysis in the field of complex phenomena, we now have a very good measure in the acquired visceral responses, especially cardiovascular, of the effect of one individual on another ("effect of person"), so that the role of the person can be isolated from the other factors.¹

From this we see that often the success of the psychotherapist is not due to his pet concepts and dogmas but simply to the result of support of one individual by another authoritative one—the effect of person. Also

a study of types (Pavlov's temperaments) perfected recently by the Russian workers, especially Bykov and his school, may give us the basis of a preventative psychiatry. Prophylaxis is the immediate great need of psychiatry, and it seems that we are laying a stable groundwork on which to build a truly preventative psychiatry comparable to the prophylaxis of infectious diseases that has emptied our contagious hospitals.

Some positive achievements of the experimental method are the ability to reproduce definite neuroses and psychoses in animals and the isolation of the responsible factors; the scientific statement of the principles of the formation of patterns of behavior and conditioning; the reproduction of certain "psychosomatic" states; the production of psychogenic hypertension by the conditional reflex method, and the success of predicting and preventing manic attacks, perfected by the Russian school of psychiatry.

In conclusion I want to add a word of caution to those who, like me, believe in the success of an objective psychiatry in ameliorating if not eliminating our mental illnesses, that we should beware of the danger of the sense of security in such words as *objective* and *dynamic*, rejecting any feeling of well-being or superiority which such banners give us, but looking behind the words into the essence of the meaning of the concepts.

W. HORSLEY GANTT, M. D.,
Johns Hopkins University.

¹ Gantt, W. Horsley: What the Laboratory Can Teach Us About Nervous Breakdown. New York: Inter. Univ. Press, 1957, pp. 73-110.

POPULAR EDUCATION

Our modern system of education . . . has produced a vast population able to read but unable to distinguish what is worth reading, an easy prey to sensations and cheap appeals . . . whether in the twentieth or twenty-first centuries the lower forms of literature and journalism will completely devour the higher has yet to be seen.

—G. M. TREVELYAN
(English Social History, 1942)

NEWS AND NOTES

AMERICAN FUND FOR PSYCHIATRY.—Dr. Richard H. Young, dean of the Northwestern University Medical School, and secretary of the Association of American Medical Colleges, has been named chairman of the American Fund for Psychiatry. He succeeds Dr. Vernon W. Lippard, dean of the Yale University School of Medicine.

The Fund, a national philanthropic organization with headquarters in Chicago, also announced the re-election of Irving B. Harris, president of Michael Reese Hospital Medical Center, as president.

The Fund provides teaching and research fellowships to young psychiatrists. It is supported by 75 major corporations and several hundred doctors across the country.

DEATH OF DR. WILLIAM F. LORENZ.—Dr. Lorenz, Professor Emeritus of Psychiatry at the University of Wisconsin died February 18, 1958, age 76.

Born in New York, Dr. Lorenz received his medical degree from the Bellevue Hospital College of Medicine. He served in the Spanish-American War in 1898, and commanded a field hospital in France during World War I. After the war he became active in promoting the rehabilitation of disabled servicemen and was a member of the Veterans Administration's medical counsel since 1923.

Widely recognized for his research in the use of carbon dioxide in the treatment of psychoses, Dr. Lorenz was also a contributor to new remedies in the treatment of syphilis of the central nervous system.

INSTITUTE FOR PSYCHOTHERAPY, UNIV. OF VIENNA.—Professor Hans Hoff announces a 2-year course in psychotherapy to be given at the Psychiatric-Neurological Clinic, University of Vienna.

The first year will introduce the problems of psychotherapy and survey the various schools and theories, their limitations and indications. The students will also participate in clinical work, in the staff and ward

conferences, and share the scientific activities of the several research departments. In the second year the various special methods of therapy of special groups of patients will be taught, especially the various forms of brief therapy will be demonstrated and practically applied.

Graduate medical students and doctors are eligible for this course. A certificate will be issued to those who successfully complete it and pass the examinations.

Further information may be obtained from Professor Hans Hoff, University of Vienna, Vienna, Austria.

DR. PHILIP R. LEHRMAN DIES.—Dr. Philip Lehrman, Clinical Professor of Neurology and Psychiatry at the New York University-Bellevue Medical Centre and visiting psychiatrist at Bellevue Hospital, died at the age of 62 on February 5, 1958.

A graduate of Fordham Medical School, Dr. Lehrman spent a year working under Dr. Sigmund Freud in Vienna in 1928. He was a member of The American Psychiatric Association and a former president of the New York Psychoanalytic Society. During World War II he served as lieutenant commander in the Medical Corps of the Naval Reserve. He contributed widely to psychiatric and psychoanalytic literature.

N.I.M.H. RESEARCH GRANTS.—Fifty-three new research grants totaling \$1,019,659, have been awarded by the National Institute of Mental Health upon recommendation of the National Advisory Mental Health Council. The Advisory Council also approved the continuation of 12 research grants amounting to \$264,292.

The new grants were awarded as follows: Psychiatry 11, Psychology 20, Pharmacology 4, Sociology 5, Biology 1, Medicine 2, Chemistry 1, Biochemistry 3, Public Health 1, Anatomy 1, Anthropology 2, Physiology 2.

INTELLECTUAL LOSS FROM BRAIN INJURY.—Psychologists at the Walter Reed

Army Institute of Research, Washington, D. C. have, as the result of a study begun in 1955 to determine the effect of brain injuries on the intellectual ability of a patient, found that while there is a decisive decrease, with time and skilled care much of this loss is recoverable.

Their report is based on a study of 64 enlisted men who had been hospitalized for serious brain injuries. At the time of induction they had been given the Army Classification Battery Tests. Two months after brain damage they were re-tested. Eighty-seven percent fell many points below their original scores.

Two months later on a further re-testing, scores showed a 50% recovery of intellectual ability, thus evidencing "considerable, spontaneous recovery."

DR. LEWIS B. HILL.—Dr. Lewis Brown Hill died February 4, 1958, at his home on the hospital grounds of the Enoch Pratt Hospital, Towson, Md. A leader in the development of psychiatry and psychoanalytic training in Maryland, Dr. Hill had been assistant professor of psychiatry at the Johns Hopkins Medical School since 1944, and a consultant to the National Institute of Mental Health.

In 1939 Dr. Hill served as president of the American Psychoanalytic Association. He was a fellow of The American Psychiatric Association and the American Orthopsychiatric Association. His extensive contributions to the literature includes a recent book, *Psychotherapeutic Intervention in Schizophrenia*.

PROTECTIVE EMBLEM FOR CIVILIAN DOCTORS IN WARTIME.—The General Assembly of the World Medical Association has approved a protective emblem, together with regulations, for civilian doctors, medical personnel, and medical care establishments during periods of armed conflict. The matter was referred to the 57 member associations of the W.M.A. for approval, and a number of the member associations have submitted the proposals to their governments for legislative action to ensure recognition and jurisdiction.

The government of the Principality of

Liechtenstein became the first to ratify the emblem and regulations.

DR. BOWMAN TEACHES IN BANGKOK.—Following the meeting of The American Psychiatric Association in San Francisco in May, 1958, Dr. Karl M. Bowman, former president of the A.P.A., and professor emeritus of psychiatry in the University of California, will go again to the Orient where, during the months of June, July and August, he will be guest teacher in the Medical School of the University of Bangkok.

THE GERONTOLOGICAL SOCIETY, INC.—The 11th annual scientific meeting of the Gerontological Society will be held at the Bellevue Stratford Hotel, Philadelphia, Pa., November 6, 7, and 8, 1958.

Abstracts of papers for the program should be submitted to the program committee for consideration by July 1, 1958. Abstracts should also be sent to the sub-chairmen of the section in which the author(s) elect to give their paper.

The sub-chairmen are: *Clinical Medicine*—Dr. Ewald Busse, Duke Univ. Hosp., Durham, N. C.; *Biology*—Dr. Morris Roackstein, Dept. of Physiology, N. Y. Univ., 550 First Ave., New York 16, N. Y.; *Psychology*—Dr. Ethel Shanas, Nat. Opinion Research Center, 5711 S. Woodlawn Ave., Chicago, Ill.; and *Sociology*—Dr. W. M. Beattie, Jr., Dept. of Sociology, Washington Univ., St. Louis, Mo.

There will be one meeting open to the public.

Co-chairmen of the meeting are: Dr. Warren Andrew, Bowman Gray School of Medicine, Winston-Salem, N. C., and Dr. Joseph T. Freeman, 1530 Locust St., Philadelphia 2, Pa.

SOCIETY FOR THE SCIENTIFIC STUDY OF SEX.—The Society will hold its first annual meeting on November 8, 1958, at the Barbizon Plaza Hotel in New York City. For details, write to Robert V. Sherwin, 1 East 42nd St., New York 17, N. Y.

REHABILITATION CENTERS.—The U. S. Department of Health, Education and Welfare has published in book form the papers

presented at the Institute on Rehabilitation Center Planning, in February 1957, titled, *The Planning of Rehabilitation Centers*.

Some 30 aspects of the planning and operation of rehabilitation centers for disabled people are discussed including information on evaluating the need for a center; estimating financial resources; budgeting; personnel recruitment, and a consideration of the relationships among the center, the community and the state and federal governments.

The book may be obtained from the U. S. Government Printing Office, Washington, D. C. at \$1.25 per copy.

THE MENTALLY RETARDED ADULT.—Under the auspices of the N. Y. State Interdepartmental Health Resources Board, an extensive report has been done by Gerhart Saenger, Ph. D., titled, *The Adjustment of Severely Retarded Adults in the Community*. The study encompasses both individuals in institutions and at home, but is concerned particularly with the latter and their adjustment within the family circle and the community.

This 176 page report may be obtained from the New York State Interdepartmental Health Resources Board, 11 North Pearl St., Albany 7, N. Y.

NATIONAL INSTITUTE OF MENTAL HEALTH GRANTS.—Surgeon General Leroy E. Burney of the Public Health Service has announced that grants amounting to \$13,693,845 have been awarded since July 1, 1957 for training in psychiatry, psychology, psychiatric and social work and psychiatric nursing. The grants have been used to establish and expand training in mental health in medical schools, hospitals, psychology departments of universities, schools of nursing, social work and public health.

AVAILABILITY OF SCIENTIFIC RESEARCH IN THE U.S.S.R.—Pergamon Institute, a non-profit foundation, has recently been formed in Washington, D. C. for the purpose of making available to English speaking scientists, doctors and engineers the results of

scientific, technological and medical research and development in the Soviet Union and satellite countries. To this end the Institute is initiating large-scale translation programs of journals, books and individual papers in these fields, which are available to learned societies, Government departments, trade associations, scientists, doctors and engineers.

The Institute will supply, free of charge, to any person in the above categories, a monthly list of all significant articles and books currently published in his field in the U.S.S.R. An English translation of any article listed may be ordered, the charge being based on a cooperative cost-sharing.

The Institute further aims to encourage the teaching of Russian to non-Russian speaking scientists; to compile and publish specialized dictionaries from and into Russian; and to serve as a forum in which Soviet and non-Russian scientists will be able to discuss problems of common concern.

Address: Pergamon Institute, 122 East 55th St., New York 22, N. Y.

INTERNATIONAL RESEARCH NEWSLETTER IN MENTAL HEALTH.—The Postgraduate Center for Psychotherapy announces the forthcoming publication of a Newsletter on Mental Health, to discuss, evaluate and exchange information in all areas of the mental health field.

Material is solicited for the first spring issue, of the following nature. 1. Description of ongoing or projected research for which the author would like constructive criticism as to the theoretical value, research design, etc. 2. Research ideas or ongoing work will be printed to facilitate replication and extension of such work. 3. Summaries of controversial presentations made at staff conferences and other meetings which are normally not published. 4. Work from foreign countries in mental health research.

Those interested in submitting material or subscribing to the publication, for which there is no charge, are asked to write to The Newsletter, Postgraduate Center, 218 East 70th St., New York, N. Y.

BOOK REVIEWS

A NEW PSYCHOTHERAPY IN SCHIZOPHRENIA. By *Marguerite Sechehaye*. Translated by Grace Rubin-Rabson. (New York and London: Grune and Stratton, 1956, pp. 199, \$4.50.)

Two books by this author have been devoted to the case of her patient Renee; namely "Symbolic Realization" published in 1947 and "Autobiography of a Schizophrenic Girl" appearing in 1951. These books have been read and discussed by many American psychiatrists.

In her book on "Symbolic Realization" Mme. Sechehaye described the successful therapy of this severely mentally ill adolescent girl with schizophrenia. The treatment extended over a period of 7 years with the result that the patient became a healthy independent adult.

In the present book the author has first summarized briefly Renee's case history "and the psychotherapy which cured her" to orient the readers in the clinical basis for what follows in the text. The book is based on a series of lectures presented at the B rgholzi Clinic, to stimulate further studies. Here she expands the theoretical and practical features of the famous case and explains her ideas on schizophrenia as a disorder.

The author considers schizophrenia as a reaction to severe psychological traumata occurring in a person with an original predisposition which is implied in the term "schizoid constitution" and which renders him unable to meet and overcome injury, frustration and anxiety. Her therapy is based on the supposition that the active phase at the beginning of a schizophrenic process represents a revival of a complicated childhood situation with its psychopathological adjustment, while the stabilization period of the psychosis is the later adjustment or defense by entering the magic world of unreality.

In the various sections of the text Mme. Sechehaye explains the reasons why it is difficult for schizophrenics to make interpersonal contacts, the nature of their defenses against this, and their primary needs, which may be attained by means of the symbolic realization type of therapy.

The therapist must offer the patient a new or different reality which would have prevented the psychosis if it had been experienced in infancy. This new reality must be presented in the form of presymbolic magic. Since this therapy is aimed at satisfying the needs and correcting the insecurities of early childhood, it can be afforded only by a therapist with a keen intuition, with a parental attitude within the structure of psychoanalysis and with a knowledge of schizophrenic symbolic methods of communication.

The book is interesting and stimulating reading and it is hoped that it will encourage others to experiment with the author's methods that we may learn finally just how successfully schizo-

phrenics can be cured by psychologic methods alone. What will happen to Renee in future years as well as to many other reported cures? Are they permanent, at least obtaining over many years? Does psychotherapy merely modify the symptomatic expressions? Or does it influence favorably the fundamental processes of the disorder? We are still urgently in need of objective, systematic prolonged follow-up studies of the results of any and all current therapies for schizophrenia.

The author states in her introductory chapter "The cure of a schizophrenic by a psychologic therapy constitutes a fact in itself. It remains to be seen whether, utilizing the same method in the same way, under conditions as alike as possible, and with similar symptoms, the same phenomenon of cure will appear again." Certainly this statement indicates a scientific attitude on the part of the therapist, and if adhered to rigidly, will afford most valuable information.

NOLAN D. C. LEWIS, M.D.,
Princeton, New Jersey

MENTAL DEPRESSIONS AND THEIR TREATMENT. By *Samuel Henry Kraines, M.D.* (New York: The Macmillan Company, 1957, pp. 555. \$8.00.)

This is a comprehensive book on mood states. The breadth of the approach is evident from the list of special areas dealt with in separate chapters: Normal Moods; Psychopathology; Psychopathology; Heredity, Physique and Statistics; Fluctuations; Physical Symptoms; Mood Disorders and Suicide; Emotional Isolation, Irritability and Fears; Thinking Changes; Sexual Disturbances; Neurotic and Schizophrenic Complications; Variations; Diagnosis; Psychologic Therapy; Biologic Therapies; The Mechanism and Etiology of the Manic-Depressive Illness: A Theory.

Dr. Kraines never wanders from the individual human problems, illustrating liberally from case histories. The many references at the end of each chapter and in the Cumulative Bibliography are an aid to the serious student of these disorders.

The main departure from most works on depressions is the author's theoretical formulation which is stated best in his own words: "The thesis of this book is a reversal of the Freudian point of view. Though acknowledging the significant role of psychic factors in modifying, complicating, and prolonging symptoms, it emphasizes rather the constitutional factor in the etiology, course, and outcome of the Manic-Depressive Illness. Presenting the evidence accumulated during the last half century, it postulates that the etiology is a combination of hereditary susceptibility and a physiologic (often hormonal) precipitating factor; that the mechanism of the illness is in disturbed function of the diencephalic area, including the thalamus, the hypothalamus, the reticular system, and the rhinencepha-

lon; and the symptoms are the result of primary physical alteration in the diencephalic area and of secondary psychic disturbance."

The author devotes an extensive appendix to the presentation of the evidence for this theory and the approach throughout the book is in relation to the theoretical framework.

While no doubt many psychiatrists will not accept this formulation, the book should be stimulating to those who are not content with a strictly psychological explanation of the depressions or satisfied with psychotherapeutic techniques only in the treatment of these common and serious disorders. The book is recommended to psychiatrists and residents in training who wish something more than is to be found in most treatises on depressed states.

JOHN G. DEWAN, M.D.,
University of Toronto.

POLICE DRUGS. By *Jean Rolin* (trans. from the French). (New York: The Philosophical Library, 1956, pp. 194. \$4.75.)

This is a valuable little volume, on the so-called "truth drugs." It includes a historical survey of the use of the various drugs in this category and a rather extensive bibliography. The author's thesis is contained in the sentence, "There is a slippery slope between forensic medicine and police torture and it becomes essential to check the descent." An eloquent plea is made for the preservation of the individual's right to keep silent in a world in which privacy is constantly diminishing. This reviewer cannot agree with the author's total condemnation of the use of the indeterminate sentence. Nor does he feel that in the U. S., at least, there is justification for the complaint that "medical reports already carry far too much weight in judicial decisions." However, the author's main thesis that great caution must be exercised in the use of an abreactive drug in police and trial procedures, is sane and timely.

MANFRED S. GUTTMACHER, M. D.,
Baltimore, Md.

INTRODUCTORY PSYCHOSOMATIC DENTISTRY. By *John H. Manhold, M.D.* (New York: Appleton-Century-Crofts, Inc., 1956, pp. 193. \$6.00.)

This book is a worthwhile contribution to dental literature relating to psychosomatic dentistry. The book is divided in 2 parts. The first part deals with the psychosomatic concepts, history, historical background, statistical methods, research, and results. The second part presents worthwhile practical applications for the dentist.

For many years it has been felt by many astute observers in dentistry that the psychosomatic concept was valid regarding the etiology of dental caries and periodontal diseases. As early as 1882 there had been published a theory that the mind could effect the dental structures. Since that time

many articles have been written dealing with the effect of emotions, anxiety and psychological processes on the dental structures. Dr. Manhold's scientific work has proved finally that there are definite psychosomatic causes for dental caries and periodontal diseases.

Many eminent dental teachers and dentists have shied away from the psychosomatic point of view and in fact have derided such a concept as being untenable. After reading Dr. Manhold's book, the reviewer thinks they will change their minds or at least look upon psychosomatics more favorably.

The book has been written with 2 purposes in mind. The first is to provide a practical scientific basis for the application of a psychosomatic concept to dentistry. The author has presented his own research studies and evaluated the results according to the number of subjects involved, the statistical significance, and the validity of the method. The second is to discuss practical applications of the psychosomatic concept to dentistry. Methods of dealing with difficult patients in situations commonly encountered are emphasized.

The author's discussions of the statistical methods and formulas used were presented for the layman to evaluate and his results could discourage many readers. Mathematical formulae are uninteresting to most people who are not interested in biometrics. These chapters would have been better placed at the end of the book.

It is the misconception of many dentists and layman that psychosomatics and hypnosis are synonymous. Manhold deals with this misunderstanding. However his statement, "there is little, if any, place for the use of hypnosis by the dentist in the dental practice" is not a valid statement. There are many dentists who are using hypnosis successfully in dentistry. The 2 reasons that the author gives for his statement are: first that the history of hypnosis is generally ill considered, and secondly that dangers can occur in the use of hypnosis by those who are not properly versed in its use and who are not completely competent to handle possible needed countermeasures. There are no procedures in medicine or dentistry that are not potentially dangerous if not carried out by skilled physicians and dentists. The thousands of well trained dentists in the United States and Canada who have been using hypnodontic techniques successfully for many years would agree that the novice should forgo its use. One of the principles of the American Academy of Applied Psychology in Dentistry is to stimulate the use of psychological procedures in dentistry, including hypnosis, and high standards of teaching have been set up to teach this worthwhile aid to dentistry, and to see that only those who are well trained and are psychologically orientated, use it.

Dr. Manhold's book is a worthwhile addition to the library of the dental student, the dental practitioner, and the dentist engaged in research.

D. MOORE, M.D.,
Faculty of Dentistry,
University of Toronto.

PRINCIPLES OF GENERAL PSYCHOLOGY. By Gregory A. Kimble. (New York: The Ronald Press, 1956, pp. 400, \$5.00.)

The author states that "the purpose of this book is to present an adequate and scientifically sound account of contemporary psychology, at the introductory level." It could be argued that the account of contemporary psychology is far from complete, there being very scant notice of such areas as emotion and thinking and no mention at all of the applied fields. However, as an introductory text book for beginning students it is sound and adequate. It follows a traditional pattern, stressing methodology and citing the usual experiments. The book is organized in 4 parts: 1. basic methodology, including chapters on intelligence presumably illustrating methodology; 2. sensation and perception; 3. the modification of behavior and 4. behavior dynamics. It is a sound, useful introductory text with no particular feature to distinguish it from dozens of other similar texts.

KARL S. BERNHARDT, PH. D.,
University of Toronto.

TROUBLES MENTAUX AU COURS DES TUMEURS INTRACRANIENNES. By H. Hicou and J. de Ajuriaguerra. (Paris: Masson et Cie, 1956, pp. 154, 1500 fr.)

This is a study of 439 cases of brain tumor from the Neurosurgical Service of the Hopitaux Psychiatriques de la Seine. Of these cases 229 (52%) exhibited mental symptoms. The authors have studied the material chiefly from two points of view. On the one hand the mental symptoms were studied according to the localization of the tumor. On the other hand the mental symptoms were classified in an effort to establish their pathogenicity.

Three types of mental symptoms were differentiated: 1. conditions indicated by confusion and dementia ("états confuso-déméntiels"); 2. changes in disposition and personality ("troubles de l'humeur et du caractère"); 3. paroxysmal changes accompanied by hallucinatory manifestations, loss of consciousness, dreamy state ("désordres paroxystiques").

Papilledema, used as evidence of increased intracranial pressure, was present in 59% of all cases and in 67% of those cases accompanied by mental symptoms. Papilledema, and consequently increased intracranial pressure, could not be correlated specifically with the mental syndromes described.

Out of 80 instances of tumors of the frontal lobes, mental disorder was present in 54, producing a syndrome characterized by confusion and dementia in 60%, changes of the disposition and personality in 37.5%, and paroxysmal disorders in 10%. Mental deterioration was the first symptom in a fifth of the cases. Loss of memory, related to events of a certain time, place and incident ("amnésie de fixation") was present in 16 cases, sometimes in pure form or predominating in a complex of other memory disorders. Akinetic conditions ("états akinétiques") were observed in 23 cases; however, in

almost every instance they were present as a consequence of the confusion. Dementia in this group often was associated with euphoria. Morbid irritability occurred in 13 cases, and emotional lability in 9 instances. Hallucinatory manifestations were observed in only 7 patients.

Out of 75 cases of tumors of the temporal lobes, mental disorder was present in 51 instances. Mental deterioration occurred as the initial symptom of the disease in 28% of the cases. Most important in this group were paroxysmal manifestations observed in 24 patients: visual, auditory, olfactory and gustatory hallucinations, and in 5 cases dreamy states. Hallucinations often indicate the beginning of the development of temporal and occipital tumors.

In 24 cases, the frontal and temporal lobes were simultaneously involved by tumors. Mental disorders in this group were present in 11 instances. Confusion, or dementia, was noticed in 41% of the cases; disorders of disposition and personality in 16%. No case of hallucinatory phenomena occurred in this group. It was not possible to define symptoms particularly characteristic of this group. The authors were not able to draw any conclusions concerning tumors of the corpus callosum.

In 75 cases of tumors of the parietal lobes, mental disorders were observed in 39 patients. Mental disorder as an initial symptom of parietal tumors was found in 16% of the cases. The authors were not able to define a particular type of psychic disorder always present in tumors of the parietal lobes. However, hallucinatory phenomena, characterized by the feeling of absence, or the illusion of transformation and displacement of one half of the body or of one extremity, were present, with rare exceptions, only in cases of parietal tumors.

In 25 cases of occipital tumors, 13 produced mental disorders. Visual hallucinations indicated the beginning of cerebral disease in 5 instances. Confusion and dementia were present in a fourth of the cases, while personality changes and disturbances of disposition occurred in a similar number. Papilledema, accompanied or not by mental deterioration, was very frequent in tumors of the occipital lobes. Mental disorder appeared in 32% of the cases as the first symptom of an occipital tumor.

Out of 61 patients suffering from the mid-brain tumors ("tumeurs mésodiencephaliques"), mental disorders were present in 23. The syndrome characterized by confusion and dementia occurred in 26% of the cases; personality and disposition changes were noted in 21%; hallucinatory phenomena occurred in 13%. Mental deterioration appeared in 11%, as the first symptom of a brain disease. Papilledema occurred in only 26 cases. Korsakow's syndrome was present in 6 cases while, with 1 exception, it was not observed in any other topographic type of brain tumor.

Out of 85 cases in which subtentorial tumors were present, mental disorder occurred in 34 patients, mental deterioration signifying the beginning of a brain disease in 11%. Although papilledema occurs very frequently, the incidence of confusion and dementia is lower than in all the other

topographic groups of cerebral tumors. In a number of cases, oniric hallucinations (dreamy state) and automatisms occurred.

The appearance of mental symptoms seems to be the result of the localization of cerebral tumors rather than of the accompanying intracranial hypertension. Influences which, in general, modify the cerebral activity, are conducive to the appearance of psychic disturbances initiated by focal involvements. On the other hand, the progress of a general psychic disorganization may mask focal symptoms.

In summarizing their observations the authors emphasize the following features of the frontal psychic syndrome: subconfusional excitation, accompanied by expansiveness; irritability and akinetic syndrome. The mid-brain psychic syndrome is characterized by Korsakow's syndrome, euphoria, oneirism, and, though rarely, akinetic mutism. Psychic syndromes of parietal, temporal and occipital tumors are dominated by hallucinatory phenomena.

In spite of the existence of focal psychic syndromes, many factors may influence the value of clinical observations. Experiences on intracranial tumors can be used for the forming of a theory of the cerebral function only if considered together with other results of anatomic, clinical and experimental research.

This is a thin volume written with pleasing succinctness which adds a group of carefully analyzed cases of brain tumors with mental symptoms to the literature. A number of the illustrative case histories are described. There is a brief review of the history of the field and frequent comparison of the findings with those of other workers. Attention is given to the influence of the premorbid personality on the development of symptomatology, although this concept is poorly integrated with the rest of the material.

N. C. MORGAN, M. D.,
Warren, Pa.

ART, MYTH AND SYMBOLISM. By Charles P. Mountford. (New York: Cambridge University Press, pp. 513, 1956. \$20.00.)

This volume is the first of a series of four of the Records of the American-Australian Scientific Expedition to Arnhem Land, Northern Australia, which was in the field for some 9 months in 1948. Mr. Mountford has had many years of experience as an ethnologist in various parts of Australia, and by his writings, and beautiful films he has put all students of man greatly in his debt. With the present volume, his crowning achievement, he has made a contribution of major significance not only to our understanding of the meaning of art and its character among the aborigines of Arnhem Land, but to the history of art. *Art, Myth and Symbolism* is a book which no writer or student of the history of art can hereafter afford to miss. For the student of the human mind the book contains much ore worth refining. The astonishing resemblance of much of Arnhem Land aboriginal art to that of the Levantine

Cave art as well as to that of the Bushman of the Kalahari cannot be accidental—it is either due to diffusion or to the fact of the unity of the human mind. The question is which? The book is illustrated with innumerable photographs, some in color, of the extraordinary art of the aborigines. The text is simply and clearly written and adds enormously to our understanding of the cultural process. Altogether a wonderful volume.

ASHLEY MONTAGU,
Princeton, N. J.

WOMEN OF FORTY. By M. E. Landau. (New York: Philosophical Library, 1956, pp. 49. \$2.50.)

This little book written by a gynaecologist, who is married and a mother, is a good book. It is primarily for the laity and for women in their forties and over, but it is also a good book for obstetricians, gynaecologists and men in general practice. It is a large subject covered in 40-odd pages. The symptoms of the menopause are described in great detail and I note that mental instability and the nervous symptoms are given special mention. I am glad the nervous symptoms are given prominence because this is the problem that the physicians and gynaecologists are asked about most frequently. Many women become alarmed over their feelings of anxiety and depression, many of them have been told they may become mentally unbalanced or insane at the menopause. If they suffer from a mental breakdown at this time of life they certainly have had previous nervous or emotional disturbances.

The treatment of the menopause is assurance; this is usually all that most women require. If the flushes are troublesome minimal doses of oestrogen hormone are beneficial but such should be avoided if at all possible for this hormone produces troublesome menorrhagia and also promotes excessive growth of the endometrium, the activity of which may be dangerous at the menopause. The significance of unusual uterine bleeding is mentioned. Any woman around the menopause who has irregular vaginal bleeding should see her physician at once, for it is the first symptom of malignant uterine disease. In the chapter on the employment of women over 40, Miss Landau urges them to keep on working. There appears to be an ineradicable prejudice in employing older women in business. A woman who is healthy mentally and physically should by all means keep on working. Idleness creates unfounded fears whilst the active woman is happy and healthy.

H. W. JOHNSTON, M. D., F. R. C. S.,
Toronto, Ont.

BIOCHEMICAL INDIVIDUALITY. The Basis for the Genetic and Phenotypic. By Roger J. Williams. (New York: John Wiley & Sons, 1956. \$5.75.)

The author's impressive background in biochemistry enables him to explore various aspects of the field as a base for his genetic concept of disease. His findings show the fallacy of attempting to establish a hard and fast set of so called

normal values. Just as no two personalities are alike, so no two individuals are chemically the same. The question still to be proved is whether the wide variations in bodily chemistry can explain the etiology of certain diseases.

Williams believes there is a genetic basis for biochemical individuality, *i.e.*, "every individual has a distinctive genetic background and distinctive nutritional needs which must be met for optimal well being," and he has done a great amount of investigation, plus the gathering of tremendous supportive evidence, to show the areas of individuality in anatomy and physiology as well as in biochemistry. He then points the way to new fields of application for many of these data, *e.g.*, in the causes of food, drug and other idiosyncrasies and in many other health and nutritional problems. The author also elaborates his ideas of implications of the concept of biological sciences, and uses the advances in psychiatry to explain some of the bases for human behavior.

In the new era of the chemical approach to mental illnesses, this stimulating and provocative book should be read by all psychiatrists.

A. E. BENNETT, M. D.,
Berkeley, Cal.

A GUIDE FOR PSYCHIATRIC AIDES. By *Charlotte R. Rodeman*. (New York: The Macmillan Co., 1956, \$3.75.)

Although this book was written for the use of psychiatric aides, it would be extremely useful for any new member of the nursing personnel in a psychiatric hospital. It contains a wealth of material which is essential for the nonprofessional worker to know if he is going to work effectively with mentally ill patients. The brief historical review presents to the student the necessary background which enables him to recognize the changing emphasis on attitudes and concepts regarding psychiatric illness and how these have come about.

This introduction provides the setting to interpret the role of the psychiatric aide as a member of the team; how the quality of patient care is affected by the attitude of the personnel toward each other, toward the hospital and toward the patient. The author has very concisely dealt with attitudes, with emphasis on the need for the aide to understand himself and to develop a wholesome attitude towards his work. She proceeds in an easy conversational way to explain how he can learn to understand the patient's behavior, his own reactions, fears or feelings of inadequacy. Her personal knowledge and understanding of the aide, gained from many years of teaching and working with this group, enables the author to present actual situations realistically. For example: in regard to motivation to get patients to participate in certain activities; "What can you do in such a situation? How do you feel about the activities yourself? If you, personally, feel that they are of no great value, it will be difficult for you to convince a patient that they are valuable. Only if you within yourself honestly feel that there is

positive value in an activity, can you convey that fact to the patient and show him that this is another step toward his recovery."

In this way she continues to explain many factors about the approach to patients, aide-patient relationships and nursing care of the patient, stressing throughout the importance for him to think of the patient as a person, that his behavior is a symptom of his illness, and his need for understanding and reassurance. The author has stressed the importance of good observation, maintenance of hygiene principles of health, protection of the patient and the physical care. In her presentation of the basic nursing procedures she has included simple, yet adequate, explanations of physiological functioning and anatomical structures to enable the aide to have a better comprehension of why and how the procedure is done.

The clarity of her presentation of subject matter and the conversational style make this book very readable and should present to the psychiatric aide a challenge to acquire the skills essential to work effectively with mentally ill patients.

ELSIE OCLVIE,
School of Nursing,
Toronto, Canada.

NEW GOULD MEDICAL DICTIONARY (2nd ed.). Edited by *Normand L. Hoerr* and *Arthur Osol*. (New York: The Blakiston Division, McGraw-Hill Book Co., Inc., 1956, pp. 1463, 252 illustrations, \$11.50.)

The terminology of rapidly growing fields since the first edition of the *New Gould Medical Dictionary* was issued in 1949 has been incorporated into this welcome second edition, with special attention to the fields of chest surgery and psychiatry. Extended coverage has been given to specialties allied to medicine, such as dentistry, veterinary medicine, organic medicinal chemistry and nuclear science.

This edition also gives both trade names and proprietary names of pharmacological drugs with definitions, although no effort has been made to assess the merits of various drugs.

In anatomy the Basle *Nomina Anatomica* terms with modifications are included, as well as the British Revision terms, and that part of the old terminology still in current clinical usage.

All in all a comprehensive volume of "live" medical terminology at a relatively modest price!

A. C.

AGEING IN TRANSIENT TISSUES. Edited by *G. E. W. Wolstenholme* and *Elaine C. P. Miliar*. C.I.B.A. Foundation Colloquium. (Boston: Little, Brown & Co., 1956. \$6.75.)

This volume contains the formal papers and the informal discussions presented at the second Ciba Foundation Colloquium on Ageing. The 27 authorities from Great Britain, the United States, France and Switzerland who participated in the symposium represent a variety of disciplines includ-

ing anatomy, biochemistry, biophysics, embryology, physiology and zoology. The 3-day-symposium dealt with "ageing in transient tissues," that is, tissues whose life span is less than that of the whole organism. It is interesting that no attempt was made at the outset to define "ageing" because, as the discussions proceeded, the term was used in almost every possible sense and, as the chairman, Prof. Amoroso, points out, no one "succeeded in formulating a simple definition to cover all the facts." Many of the 17 papers concern ageing phenomena in the foetus or the reproductive organs. The other papers concern ageing in erythrocytes, sweat glands, mitochondria, deer antlers and senescent leaves.

Three papers deal with the age factor in foetal development. Dorothy Price described organ culture studies demonstrating that in the foetal rat, endogenous testicular hormone maintains the Wolffian but not the Mullerian ducts and stimulates development of the embryonic seminal vesicles and prostate. Jost discussed the possibility that foetal development depends upon definite changes in foetal endocrine function and at appropriate stages with a somewhat stepwise utilization of hormones by the foetus and limited periods of action for the foetal endocrine glands. The probable importance of the placenta was emphasized by some of the discussants. Evidence that foetal development can be modified by disturbances in endocrine balance in the mother was presented by Tuchmann-Duplessis who described studies on the effects of administering growth hormone or cortisone to pregnant rabbits.

There are three papers on ageing in transient ovarian tissues. Zuckerman dealt with the germinal epithelium, showing that it has little or no regenerative capacity and that oögenesis does not occur appreciably during postnatal life. The "history and fate of redundant follicles" was described by Williams who had studied the sequence of changes in follicles undergoing atresia and the effects of gonadal and pituitary hormones upon this remarkably complex process. The growth and function of corpora lutea resulting from ovulation induced during pregnancy in guinea pigs was described by Rowlands. This work required first making quantitative studies of the development of corpora lutea, a problem that had not been investigated previously.

Four contributions concern the placenta. Wislocki discussed morphological and histochemical studies emphasizing that the "mammalian placenta is not a unified organ . . . but consists of several membranous structures" whose interrelations differ in various species and whose differentiation and functions progress at different rates during gestation. Physiological aspects of ageing in the placenta were considered by Huggett in his paper on "chronological changes in placental function." Villce discussed certain "biochemical evidence of ageing in the placenta" while Harrison described studies on the uptake of radioactive potassium by the placenta and uterus during pregnancy. All these investiga-

tions show that there is surprisingly little evidence of senescence in the placenta even at term despite the long accepted view that there should be profound morphological and biochemical changes.

Ageing of red blood cells was considered by Lovelock and by Mollison. Lovelock dealt with physical aspects of the problem and described his work on diffusion and the influence of temperature. He also commented on the possible application of information theory to problems of ageing. Mollison's paper concerned metabolic investigations suggesting that ageing of erythrocytes is probably related to exhaustion of the initial supply of irreplaceable "fuel."

Applications of electron microscopy to the study of ageing were described by Fawcett, who investigated the germinal epithelium and interstitial cells of the human testis, and by Dempsey, who studied "mitochondrial changes in different physiological states."

Wislocki also presented a paper on "the growth cycle of deer antlers." This represents a remarkably direct approach to the investigation of ageing in transient tissues. Another aspect of ageing was provided by Montagna's studies on the apocrine sweat glands in axillary skin biopsies from normal young women, several pregnant women, and from older women up to 78 years of age.

The process of ageing as seen by the botanist was described by Yemm. In senescent, yellowing leaves respiration continues at a high rate but catabolic changes predominate in protein metabolism.

This volume provides an interesting appraisal of current investigations on ageing in transient tissues. The papers are in a pleasant, somewhat conversational style. The informal discussions add to the value and interest of the proceedings. The participation of the audience and the effective but not rigid guidance of the chairman are exemplary.

W. G. B. CASSELMAN, M. D.,
University of Toronto

CASE BOOK IN ABNORMAL PSYCHOLOGY. By Henry Weinberg and A. William Hise. (New York: Alfred A. Knopf, 1956, pp. 320. \$4.50.)

This is a handy opus, containing twenty cases which include major areas of psychological abnormalities. Among these are child, adult, neurotic, organic and psychotic entities. The functions and development of each disorder in the total growth pattern of the individual is pointed up.

The cases are offered minus interpretation and with no comment, other than a general introduction to the book and a specific label on each case presented. This contribution can be employed for any theoretical orientation and for whatever depth analysis is being considered. In this respect, the book provides a broad structural basis for examining the material presented.

ARTHUR LEARNER, PH. D.,
Los Angeles City College.

FOLLOW-UP RESULTS IN PSYCHIATRIC ILLNESS¹DONALD W. HASTINGS, M.D.²

INTRODUCTION

Evaluation of the natural courses of the various psychiatric illnesses rests on the cornerstone of accurate follow-up data. Particularly at the present, when therapeutic efforts of many types are being tried, does one need data to serve as a bench mark against which to check therapeutic results. One wishes that there were available in the psychiatric literature investigations wherein a matched group of controls had been handled in similar fashion to a treated group, the variable under assessment being some type of therapeutic procedure. Short of this, the "second best" approach appears to be that of taking a consecutive group of patients who came to psychiatric attention during years when a certain treatment was not used and to let the follow-up on these patients serve as a guide against which to check a subsequent and presumably similar group who received this therapy. The present study takes such a direction by asking the question, "What does the follow-up show on a group of hospitalized patients who did not receive shock therapy and the newer drugs?"

LITERATURE

* A review of the literature of prognosis in psychiatric illness is a lesson in humility, for it is difficult to obtain a clear picture either of spontaneous remission rates or how the rates differ from the spontaneous when some treatment is used. One is reluctantly forced to admit that we simply do not possess the factual knowledge as of 1957 which permits us to say that we have any treatment procedure in psychiatry which promises a better outlook for a particular illness than does nature left to her own devices. To say otherwise is to express a hope, but it does not appear to express fact. The obvious ex-

ceptions are those organic diseases of the brain for which exist a more or less specific therapy (for example, antibiotics in central nervous system syphilis). Speaking to the same point, Appel, *et al.*(1) said,

A review of the literature gives one the impression that there is no room for dogmatism with regard to methods of therapy, factors making for the maintenance of remission, and essential elements in the process of therapy.

This article is a review of the literature to 1953 and contains a very good bibliography.

There must be many reasons for the lack of prognostic data; from a practical standpoint it is difficult to trace people years out of a hospital, and it is expensive and time-consuming to visit any sizable number that one does trace. There are other inherent difficulties: that diagnoses may vary widely, doctor to doctor, clinic to clinic, hospital to hospital, is generally acknowledged. Condition at time of discharge or at time of follow-up may be viewed in different ways; for example, the excellent paper on prognosis in schizophrenia by Ebaugh and Romano(16) takes the approach of judging follow-up status in terms of the clinical examination, *i.e.*, existence of insight, presence of symptoms, etc. The present study takes quite a different set of criteria, *i.e.*, those relating to social adaptability, and hence the two studies are not comparable. Some works are based entirely on letters or questionnaires, others on interview of the patient, still others on both kinds of data. Several authors judge remission to have occurred if the patient, at the time of follow-up, had not returned to the particular hospital of his previous admission.

Several studies do not attempt a breakdown by diagnosis but report results for an entire patient group admitted to a mental hospital. One of the most fascinating of such reports is that of Bond and Braceland (3) who give the discharge (not follow-up) condition of 23,146 mentally ill patients admitted to the Pennsylvania Hospital between 1751 and 1928. About one-third (7,755) were discharged as recovered and 6,573 as

¹ Read at the 113th annual meeting of The American Psychiatric Association, Chicago, Ill., May 13-17, 1957.

² Address: Univ. of Minn., Minneapolis 14, Minn.

improved! In 1925, Bond (2) reported 1,024 hospitalized patients followed for 5 to 10 years by questionnaire and letter. Twenty-six and seven tenths per cent remained well, 14.5% showed improvement, 32.3% were dead, and 25.5% were stationary or worse. Fuller (6) in 1935, utilizing "methods of social case work" to gauge the success the patient had in adjusting to the conditions of family and community life, had 947 patients discharged 10 years before from a state hospital followed by home visits from field workers. The outcomes were as follows:

In community after 10 years..	54.5%
In mental hospital after 10	
years	21.4
Dead within 10 years.....	23.4
Other outcome .....	.7

Schizophrenia.—This category has received, understandably, the greatest attention in the prognostic literature. Appel, *et al.* (1) find that 5 years after treatment (of schizophrenia) the average percentage of patients recovered or much improved was the same, 27%, whether insulin shock therapy or "non-specific" therapy had been used. This is a provocative finding in view of the difficulties in giving insulin shock therapy and the dangers it presents. Romano and Ebaugh (16) followed 600 patients consecutively admitted to the Colorado Psychopathic Hospital between 1933 and 1936 and diagnosed as schizophrenia, paranoid condition, and paranoia. Study was by personal re-examination and the criteria were clinical, i.e., insight, symptoms, etc. The follow-up period covered 1 to 4 years. Of the 600, 345 (57.5%) were examined; 0.29% were in remission, 7.25% showed marked improvement, 15.65% were improved, 55.65% were unimproved, and 21.16% were worse. Using the clinical criteria they did, the follow-up gave much more pessimistic results than using the criterion of social adjustment.

Bond and Braceland (3) in 1937 reported on 116 cases of dementia praecox: 12% recovered, 23% improved, and the remainder were unchanged or dead. Freyhan (5) compared 100 schizophrenics admitted to a mental hospital in 1920 with a similar group admitted in 1940. The follow-up period was 13 years. The former group had no shock

therapy, the latter did. He found that if the patients who died are excluded, 40-45% of both groups became chronic; this is the same number found to have become chronic by Bleuler at the beginning of the century. The malignant pattern of chronicity could not be predicted reliably on grounds of onset or personality nor averted by therapeutic means. Guttman, *et al.* (7) followed a group of 188 schizophrenics admitted to Maudsley Hospital in 1934 and 1935 for 4 and 5 years and found that approximately 50% were invalids either at home or in the hospital. About one-third had made a total or social recovery. This group was not treated by any form of shock therapy. Hunt, *et al.* (10) considered 641 cases of dementia praecox $3\frac{1}{2}$ to $10\frac{1}{2}$ years after their first admission to Rochester (NY) State Hospital. These were "untreated" cases and were followed either by letter or a visit from a social worker. Of the 641 patients, 225 (35.1%) were termed improved or much improved at the time of discharge from the hospital. This was the group that was followed: 49.4% remained well, 12.4% had temporary relapses, 21.8% had permanent relapses, and 16.4% could not be traced. Corrected for the total, approximately 17% of the 661 patients were found to be recovered at time of follow-up. Danziger (4) presents a group of findings based on data from the U. S. Bureau of the Census. The prognosis for state hospital patients was calculated for 1933 which was prior to any shock therapy. In dementia praecox, "the odds against recovery are seen to be, on admission, 10,000 to 545; after 20 years, they are 10,000 to 15."

In general the follow-up literature of schizophrenia varies between the poor outcomes of Danziger and Romano and Ebaugh to studies showing somewhat more optimism. However, if Appel's 5 year follow-up figure of 27% remission is taken to represent an approximate average, the future for most persons obtaining a schizophrenic diagnosis is dark indeed.

Manic Depressive Reaction.—The number of studies dealing with the prognosis of this disease are few. A recurring type of illness presents serious problems as to how to evaluate the follow up, but whatever the criteria used, the prognosis for this disease

is not good. Bond and Braceland(3) report on 171 cases followed for 5 years; 50% were listed as much improved with the remainder improved, unchanged, or dead; 6% were suicides. Fuller(6) in the article previously mentioned followed 327 manic depressives; 56% were in the community 10 years after hospitalization; 22% of the group were dead and the remainder in hospitals. Danziger(4), using the U. S. Bureau of the Census data finds that the odds against recovery in the hospital, on admission, are 10,000 to 3,729. After 20 years the odds are 10,000 to 99. Landolt(12) followed 60 young patients (average age 18) in whom the initial hospital diagnosis was manic-depressive psychosis, circular type. Cases were followed 5 to 25 years. Only 10% had had no recurrence since the initial hospital admission, and he makes the point that difficulties of an affective nature occurring in adolescence have a poor prognosis. Nine of the group subsequently received a schizophrenic diagnosis.

Involucional Melancholia.—Bond and Braceland(3) report on 47 patients and give a spontaneous recovery rate of 27% over a 5 year period. There is one interesting statement in this article that calls up an almost forgotten period, "It should be kept in mind that our figures in this group (involucional melancholia) encompass a time which antedated the present vigorous treatment with endocrine products." Danziger's census figures give the odds against recovery in the hospital, on admission, as 10,000 to 2,090. In 20 years the odds are 10,000 to 20. The text by Strecker and Ebaugh(18) gives a recovery rate ranging from 23-40%. Noyes(14) states that, "about 40% of cases of involucional melancholia recover. Convalescence however is slow and those who recover frequently are ill for two or three years."

Psychoneurotic Reactions.—Most of the statistics available on the prognosis of the neuroses relate to outcome on patients who have been admitted to a mental hospital which also receives psychotic patients. Hence one guesses that these statistics encompass the "sicker" neurotics and that the outcomes of non-hospitalized cases might be more favorable. Some authors, like Bond and Braceland(3), question the diagnosis of a

neurosis when such a patient is admitted to a hospital which is known in the community to receive psychotic patients. They report 37 patients for a recovery rate of 57%. Holt(8) reported a follow-up on 199 patients admitted to the psychiatric section of a university hospital where they received a diagnosis of psychoneurosis, mixed type. She interviewed the patients personally 6-12 years after discharge; 54% were either well or almost so. Masserman and Carmichael(13) studied 100 neurotics one year after they were admitted to the University of Chicago Clinics. About 60% of the patients treated for neuroses showed definite improvement, and two-thirds of this 60% made a stable social adjustment. Danziger's(4) census figures for neuroses show the odds against recovery in the hospital, on admission, to be 10,000 to 2,840. After 20 years the odds are 10,000 to 40. Pollitt(15) finds that, of 45 patients having obsessional states and followed 4 or more years, 64% had become either free of symptoms or socially adapted.

GENERAL DATA

Since today the majority of hospitalized patients tend to receive some variety of shock therapy or one or more of the newer drugs or, in some centers, intensive psychotherapy, the question of how many people, formerly ill, made some degree of social recovery without having been exposed to these therapies becomes an important problem. For only if the "spontaneous" rates of remission are known, can it be stated with finality that a new "treatment" does or does not help sick people. The purpose, then, of the present study was to determine the outcomes of a relatively large patient group, none of whom had "modern" treatment, some years after admission to the University of Minnesota Hospitals.

A brief statement is needed to explain the term "modern" treatment as used in this context. In a prognostic study of the schizophrenic population of this group of patients, Schofield(17) stated the circumstances of the therapeutic setting which apply to the total patient group,

A word should be said concerning the nature of the treatment received by the (schizophrenic)

patients. They were hospitalized for an average of 40 days ($M=39.9$; $s=30.1$) on a small locked ward (35 beds). The psychiatric service was primarily a diagnostic and teaching unit with a small eclectically oriented staff. In the assignment of formal diagnoses the official nosological system of The American Psychiatric Association was applied. The usual medical facilities of a psychiatric hospital were available and were used as indicated (*e.g.*, sedatives, hydrotherapy, nursing management of regimen, etc.). Occupational therapy facilities were available and were used extensively in the treatment program; general recreational facilities were extremely limited. Because of the small staff and the generally diagnostic orientation of the unit, psychotherapy was of a most limited nature. No use was made during the interval under study of a convulsive or "shock" therapy. It might reasonably be held that recovery and improvement figures for this sample would reflect relatively "spontaneous" remission, and that factors found to differentiate between those with good and those with poor post-hospital courses might be used to equate later patient groups for study of the efficacy of specific therapies such as insulin shock.

None of these patients had any form of so-called "organic" therapy while in the hospital (*e.g.*, metrazol, electroshock, insulin shock, neurosurgery, carbon dioxide, etc.). Therapy consisted of general supportive measures: physical and laboratory work-up with indicated therapy (for example, malaria for paresis); discussion of emotional problems, mainly in the area of current problems; reassurance; explanation and persuasion; good diet and occasional sedation for sleep; the sanctuary of the hospital; hydrotherapy, physiotherapy; and occupational therapy. The average patient stay was 45 days.

For the group as a whole, an evaluation of prognosis in relationship to length of illness prior to hospitalization was not done. In general, the admission policy is to accept relatively acute problems for study and treatment, and on this basis the patient group cannot be considered to be a "chronic" group. Schofield, *et al.* (17) made a separate study of prognostic factors in the schizophrenic segment.

Nor was there any attempt made to evaluate the type of therapy given these patients either in the hospital or subsequent to discharge. While it would have been desirable to have an evaluation of treatment received by these patients, it was felt that retrospective evaluation based on studying the hospi-

tal records would at best be of questionable value and possibly misleading. In a teaching hospital one can have reasonable confidence in the consistency of diagnostic criteria if checked by the senior staff; but when medical students, interns, residents of several levels of experience, plus full-time staff all see patients, the retrospective variables with respect to therapy are too many. The same holds true for conditions which occurred to the patient following discharge. Here again the variables would have been impossible to evaluate and no attempt was made to do so.

METHOD OF STUDY

During the years 1938-1944 inclusive, 1,638 patients were admitted to the psychiatric section of the University Hospitals, and this constituted the group to be studied.

To reduce the errors inherent in a mailed questionnaire, it was decided that these patients should be seen personally and by one examiner. A psychiatric social worker was given special training, including personal experience in the handling of statistical data. Suitable forms were made up which permitted the recording of raw data in a form available for statistical handling. The major criterion of the follow-up was as follows. We would concern ourselves with the manner in which the patient had adjusted *socially* after leaving the hospital, *i.e.*, was he able to live at home in his family and community as a productive and accepted person or was he not? Or did the answer lie somewhere in between? Hence, we would not be concerned primarily with residual symptoms, if any, unless these symptoms interfered with his family and/or community adjustment. One would guess that if a person had a substantial amount of residual symptoms, say of a paranoid nature, his adjustment must be interfered with. While such a deduction was true in the majority of instances, it was not entirely true in all instances. To repeat, *social adjustment* following hospitalization was the factor being sought. Freyhan(5) has summed up this attitude well,

Experience has shown that patients with few exceptions—and there will always be exceptions—remain outside of the hospital as long as they appear improved in the environment from which they came. It would be puristic to cling to prin-

ciples of insight or ideals of "restitutio ad integrum" as if the patient were an entity to himself, living in vacuum. The patient's re-integrative capacity can be judged only against the background of what constitutes his world, his situation, his partners, and people.

A scheme of grading each patient's social adjustment was devised. Perhaps because we worked in a university setting, the easiest grading system seemed to be a modification of the university marking system as follows:

A—Excellent: Patient had no further trouble of the type for which he was hospitalized originally.

B—Good: Patients were largely making a good social adjustment. To a small extent they had been bothered by the complaints they presented at the time of hospitalization, but these occurred infrequently, bothered the patient or his family to a minimal degree, or had gradually diminished and disappeared within the year following hospitalization. These patients may have spent a short time in a state hospital; usually it was immediately following initial hospitalization at the University Hospitals, and the patient was soon paroled and never returned.

C—Fair: Patients were in and out of state hospitals, or worked and made a good adjustment for a time but had relapses of the illness for which they were hospitalized. Although these patients had been well for relatively long periods of time, they usually had two or three episodes of illness.

D—Poor: Patients had spent more than half of the time between hospitalization and follow-up in an institution, incapacitated because of the illness, or functioning on the inadequate level which characterized them at the time of university hospitalization. For the most part, the patient or the patient's family considered him to have a large amount of trouble.

E—Fail: Patients had continuous trouble of the type for which they were hospitalized. Many of them were sent from the University Hospitals directly to a state institution and remained there. Others were cared for at home by their families, but none of them recovered even for a short while. Some were worse.

The follow-up study was done in 1950. Since the patient group had been hospitalized

1938-1944 inclusive, the follow-up data covers a minimum of 6 and a maximum of 12 years. Because it would have caused patient groups to be too small for meaningful statistical handling had they also been broken down by exact number of years since discharge, this was not done. In the data of this report, then, there is no way to tell how long patient groups have been out of the hospital within the limits of 6 and 12 years.

Having adopted the essential criterion for the study and the grading system to be used with it, the total patient group was then checked by name against the central registry maintained by the State of Minnesota. This registry lists all people in state institutions (hospitals, prisons, etc.). Patients who were found to be in one of the state hospitals and who had been there since the approximate date of discharge from University Hospitals were classified as in Group E and no further follow-up was attempted on them. It was assumed that they had been consistently so ill that adjustment outside of the hospital was not possible. This process may have downgraded a few patients; for example, a patient who had improved sufficiently so that the state hospital staff considered provisional discharge, but pre-discharge social service investigation revealed no possible extra-hospital placement or grossly unsuitable placement and the improved patient stayed on.

The remaining patients were then arranged geographically as to section of the state, and the social worker planned her itinerary. She traveled over 30,000 miles within the state interviewing patients and their families and other persons who might fortuitously give data. As an example of the last, she might stop at the postoffice in a small town to find the location of a former patient now living on a farm, only to have the mail carrier say, "You're not going out to see that crazy man, are you"? This kind of data was taken to have value in representing a community attitude. In several instances an attempt to call at a home (with the car outside carrying a University emblem) was met with a rudely slammed door. This occurred with patients who had been diagnosed as having some form of paranoid disturbance. Lacking any other

TABLE 1
ORGANIC BRAIN DISEASE
(ACUTE AND CHRONIC DISORDERS)

Diagnosis	Total	% Male	% Female	% A	% B	% C	% D	% E	% Died	% Suicide	Mean age in hosp.	% "Lost"
1. Organic brain disease												
With psychosis	100	64	36	11	14	4	14	57	35	2	46.6	1.9
Without psychosis..	116	67	33	22	12	3	10	53	37	1.7	39.9	14.6
Senile and arterio-sclerotic	34	44	56	3	23	9	3	62	60	0	66.7	2.15
Epilepsy and psychosis	34	60	40	9	26	6	15	44	12	0	29.6	2.70
Mental defect	32	34	66	3	19	3	15	60	0	0	32.0	2.36
2. Toxic psychosis * ...	6	—	—	—	—	—	—	—	—	—	—	—
3. Drug addiction *	10	—	—	—	—	—	—	—	—	—	—	—
4. Alcoholism †	23	88	12	4	17	13	9	57	22	4	41.5	1.72

* Number of cases too few to be meaningful.

† Includes cases with and without psychosis. Follow-up data on alcoholism, not on psychosis.

data, such a patient would be placed in Group D.

Follow-up data was obtained on 1,261 of the total of 1,638 patients. This figure includes the patients who had been resident continuously in a mental hospital and gives a percentage of 77 of the total group who were followed. The group of 377 patients, 23%, who were "lost" consisted of people who had left the state or whose whereabouts, if they were still in Minnesota, could not be discovered. No attempt was made to follow-up patients who had moved away from the state. A breakdown of "lost" patients was made by diagnostic category, and it was found for the most part that they were uniformly spread, percentage-wise, throughout the various diagnostic groups. Hence the "lost" cases do not influence the

follow-up results materially. (See "Lost" column under each diagnostic heading.)

In patients who were found to have died subsequent to discharge, the recorded death certificate was checked. In relation to the question of suicide, we were surprised to learn how infrequently this seemed to occur. Table 2 shows that 18% of hebephrenics died, that the mean age was only 22.6 years, and that none was listed as suicide. Table 3 shows 16.4% of manic-depressive, depressed type, dead, with the mean age of 30.6 years and that only 6% were suicides. Of involutional melancholia cases dead (13.3%), none was listed as suicide. Table 4 shows 17% of patients diagnosed "reactive depression" dead, only 5% as suicides. One might ask whether some of the deaths in these groups were not suicide. The only

TABLE 2
SCHIZOPHRENIC AND SCHIZOID PSYCHOTIC GROUP
(SCHIZOPHRENIC REACTIONS)

Diagnosis	Total	% Male	% Female	% A	% B	% C	% D	% E	% Died	% Suicide	Mean age in hosp.	% "Lost"
1. Schizophrenia												
Simple type	43	52	48	7	23	9	9	51	2.3	2.3	27.3	1.5
paranoid type	60	47	53	3	15	10	22	50	0	0	32.2	1.93
Hebephrenic type ..	22	40	60	9	18	13	0	59	18	0	22.6	0.21
Catatonic type	48	48	52	17	21	17	12	33	1.9	0	27.0	1.93
Mixed type	39	44	56	3	28	15	15	38	1.7	0	28.4	1.29
2. Paranoid psychosis ...	30	44	56	10	10	21	10	49	1.7	0	36.8	3.43
3. Schizoid psychosis * ..	5	—	—	—	—	—	—	—	—	—	—	—
Totals †	251	46	54	8	19	14	12	47	4.2	0.4	29.5	1.71

* Two few cases to be meaningful.

† Exclusive of "Schizoid Psychosis."

TABLE 3

AFFECTIVE PSYCHOSES

(AFFECTIVE REACTIONS)

Diagnosis	Total	% Male	% Female	% A	% B	% C	% D	% E	% Died	% Suicide	Mean age in hosp.	% "Lost"
1. Manic-depressive												
Depressed	67	36	64	15	28	16	9	31	16.4	6	39.6	3.65
Manic	42	30	70	9	31	17	17	27	4.7	2.4	33.7	2.36
Mixed	26	30	70	11	31	8	23	27	5	5	40.7	2.15
Total	—	—	—	—	—	—	—	—	—	—	—	—
2. Involutional melancholia	135	32	68	12	30	14	16	28	8.7	4.5	38.0	2.72
	45	16	84	4	27	18	25	27	13.3	0	53.6	2.36

TABLE 4

PSYCHONEUROTIC GROUP

(PSYCHONEUROTIC REACTIONS)

Diagnosis	Total	% Male	% Female	% A	% B	% C	% D	% E	% Died	% Suicide	Mean age in hosp.	% "Lost"
Anxiety state	14	28	72	29	36	7	14	14	0	0	32.0	2.36
Hypochondriasis	95	25	75	6	19	16	24	35	7.4	0	37.2	8.58
Hysteria	72	25	75	24	32	8	10	26	6	0	30.5	9.23
Obsessive-compulsive ...	23	52	48	13	31	9	4	43	0	0	31.0	1.71
Reactive depression	58	46	54	19	29	22	5	24	17	5	42.6	7.08
Mixed	109	28	72	17	23	11	16	33	11	1.1	35.9	8.80
Total	371	34	66	18	28	12	13	29	7	1	34.9	6.3

TABLE 5

BEHAVIOR DISORDERS AND UNDIAGNOSED PSYCHOSES

(PERSONALITY DISORDERS)

Diagnosis	Total	% Male	% Female	% A	% B	% C	% D	% E	% Died	% Suicide	Mean age in hosp.	% "Lost"
Psychopathic personality												
Asocial	41	52	48	17	17	12	10	44	9.8	0	25.9	7.08
Mixed	21	48	52	0	43	14	14	29	0	0	29.9	1.50
Pathological emotionality	9	67	33	45	33	0	22	0	0	0	29.7	0
Sexual	9	100	0	22	22	11	11	44	0	0	35.2	1.29
Total	80	67	33	21	28	9	14	28	2.45	0	30.2	2.47
Problem child	10	70	30	20	30	0	30	20	0	0	16.0	0
Simple adult maladjustment	20	40	60	25	15	5	25	30	5	0	30.7	2.58
Total	30	55	45	22.5	22.5	2.5	27.5	25	2.5	0	23.3	1.28
Undiagnosed psychosis ..	11	45	55	9	27	0	27	37	27	0	48.0	2.15

factual answer one can give is that if they were, they were not so listed on the official death records. No patient died by homicidal means and no patient killed another person.

On the subsequent tables reporting follow-up results, all figures represent percentages except "total," which is given in number of cases involved in that group and "Mean Age in Hospital" which is expressed

in years and refers to age at time of hospitalization. The columns labeled "Died" and "Suicide" are separate, i.e., suicides are not represented as a percentage of "Died" but as a percentage of "Total." To obtain the percentage of "Total" not living, one must add columns "Died" and "Suicide."

Patients who are in column "Died" are also included in the grading system (Col-

umns A, B, C, D, E). Thus a patient whom follow-up showed to be dead from coronary heart disease and whose family on interview reported that he had been well mentally since leaving the hospital would be included in column A, etc.

RESULTS^a

Although detailed data are contained in the several tables and these are self-explanatory if one has first acquainted himself with the five-step grading system, a few observations are of interest.

Organic and Toxic Psychosis (Acute and Chronic Brain Disorders)

1. Organic Brain Disease Group, "with psychosis" and "without psychosis." For the most part these were patients who had syphilis of the central nervous system, brain tumor, sequellae of head injury, and encephalitis. With the exception of the "A" grade (twice as many "without psychosis" patients had no further difficulty after leaving the hospital), these two groups, differentiated as to whether or not psychotic symptoms were manifest, ran a remarkably similar course of adjustment, including deaths and suicides. "Without psychosis" with organic brain disease accounted for the highest percentage (14.6) of "Lost" patients in the entire study. It appears that the presence or absence of a psychotic reaction in these brain damaged patients did not influence to any degree the chances for subsequent social adjustment, death, or suicide.

2. Senile and Arteriosclerotic Group. Although 60% were dead at the time of follow-up, it is interesting that between discharge and time of death (or follow-up), 26% fell into groups A and B, i.e., had made a satisfactory social adjustment for the most part.

^a Diagnoses made in accordance with the current *Diagnostic and Statistical Manual of Mental Disorders* as revised in 1952 are carried in parentheses. The cases were diagnosed with the nomenclature standard during 1938-1944 and hence are given as the primary diagnoses.

The Schizophrenic Groups (Schizophrenic Reactions)

These data serve again to emphasize the gravity of prognosis for patients diagnosed as having schizophrenic reactions. Of these persons, 29% achieved grades A or B, i.e., made a reasonably satisfactory social adjustment. The data reaffirm that patients diagnosed as being in the "paranoid" subgroup are older and have the poorest prognosis while those diagnosed "catatonic" have the most favorable outlook. Contrary to what we had expected, there were few "Lost" patients in the schizophrenic groups. We had anticipated that a larger number might have become vagrants and wanderers. No meaningful sex differences appeared in the schizophrenic groups.

Affective Psychoses (Affective Reactions)

The data reaffirm the finding of sex difference in manic-depressive reaction, i.e., about twice as many women as men were so diagnosed. This finding is mentioned in most psychiatric texts. The manic-depressive diagnosis carries a 42% chance for reasonably satisfactory social adjustment (A and B). The question of suicide in these psychotic depressions has already been touched upon.

The prognosis for involutional melancholia (A and B, 31%) is not much better than for schizophrenia (A and B, 27%). The chance of having "no further psychiatric difficulty" (Group A) was the poorest, 4%, of all psychotic reactions. This guarded prognosis justifies consideration of major treatment measures in the attempt to stem the tide of involutional melancholia.

Psychoneurotic Group (Psychoneurotic Disorders)

It is probable that these patients did not represent "average" psychoneurotic problems with respect to degree of illness, since they were admitted to a psychiatric hospital. One guesses that they represented patients at the severe end of the spectrum, but this is only a guess. Women outnumbered men three to one in all subgroups except "obses-

sive-compulsive" and "reactive depression" in which no significant sex differences were seen. Keeping in mind that staff time and length of stay did not permit psychotherapeutic management in the form of "uncovering" techniques while in the hospital and that the absence of psychiatrists in private practice in rural Minnesota during the follow-up period made any such therapy highly improbable—any medical therapy was most likely in the hands of general physicians—the spontaneous remission rates in these (presumably) seriously involved psychoneurotic patients is of real interest. Taken as a group (371 cases) the outlook for satisfactory adjustment (A and B, 46%) without any specialized therapy appears fairly good. Even the obsessive-compulsive group, ordinarily considered to have a poor outlook, had a 44% (A and B) satisfactory social adjustment. Anxiety and hysterical reactions turned out to have the best spontaneous outlook, and this is in accordance with textbook reports.

SUMMARY

1. The study considered 1,638 patients consecutively admitted to the psychiatric section of a university hospital.

2. The duration of illness prior to hospitalization, as determined by admission policy, was reasonably short, *i.e.*, they tended to have "acute" illnesses.

3. No "modern" therapies were used. Outcomes are judged to represent spontaneous outcomes.

4. Follow-up was by personal interview within a range of 6-12 years subsequent to hospitalization; 77% of the group were followed up.

5. The criteria were those of social adjustment or lack of it.

6. Results are presented in the tables.

CONCLUSIONS

1. The follow-up results as given are judged to portray the natural courses—or the spontaneous outcomes—of the various mental disorders.

2. Using the same methodology, any treatment under test must exceed, by a significant

difference, these spontaneous outcomes if it is to be considered of value.

BIBLIOGRAPHY

1. Appel, K. E., Myers, J. M., and Scheffin, A. E.: *Arch. Neurol. and Psychiat.*, **70**: 459, 1953.
2. Bond, E. D.: *J.A.M.A.*, **85**: 503, 1925.
3. Bond, E. D., and Braceland, F. J.: *Am. J. Psychiat.*, **94**: 263, 1937.
4. Danziger, L.: *Dis. Nerv. Sys.*, **7**: 229, 1946.
5. Freyhan, F. A.: *Am. J. Psychiat.*, **112**: 161, 1955.
6. Fuller, R. G.: *Psychiat. Quart.*, **9**: 95, 1935.
7. Guttman, E., Mayer-Gross, W., and Slater, E. T., *J. Neurol. and Psychiat.*, **2**: 25, 1939.
8. Holt, Shirley M.: Prognostic factors in psychoneurosis, mixed type. Unpublished Ph. D. thesis, University of Minnesota, 1955.
9. Holt, W. L., and Holt, W. M.: *Am. J. Psychiat.*, **95**: 583, 1938.
10. Hunt, R. C., Feldman, H., and Fiero, R. P.: *Psychiat. Quart.*, **12**: 414, 1938.
11. Israel, R. H., and Johnson, N. A.: *Am. J. Psychiat.*, **112**: 903, 1956.
12. Landolt, A. B.: *Bull. N. Y. Acad. Med.*, **33**: 65, 1957.
13. Masserman, J. H., and Carmichael, H. T.: *J. Ment. Sci.*, **84**: 893, 1938.
14. Noyes, A.: *Modern Clinical Psychiatry*. Philadelphia: W. B. Saunders & Co., 1939.
15. Pollitt, J.: *Brit. Med. J.*, **1**: 194, 1957.
16. Romano, J., and Ebaugh, F. G.: *Am. J. Psychiat.*, **95**: 583, 1938.
17. Schofield, W., et al.: *J. Consult. Psychol.*, **18**: 155, 1954.
18. Strecker, E. A., and Ebaugh, F. G.: *Clinical Psychiatry*. 4th ed. Philadelphia: Blakiston and Sons, 1935.

DISCUSSION

FRANKLIN G. EBAUGH, M. D. (Denver, Colo.).—In my opinion, the basic design of Dr. Hastings' study is excellent. I refer to his use of the essential control group; description of the groups; large numbers, which make the statistics more valid; criterion of measurement; and analysis of results. Others who wish to study this and related problems can profit from this pioneering. My discussion will refer 1. to methods of reporting research, 2. to communication of exact meanings—definition of terms, of assumptions, of methods, 3. to use of literature in the field, and 4. to control of variables.

Dr. Hastings has thought through and resolved a great many more of the problems involved than was first apparent. A more formally outlined presentation would help others to apply the work to their own research problems and analyze for themselves the dependability of results, and also help clarify their own thinking.

Regarding communication, the problem of study was stated as follows: "What does the follow-up show on a group of hospitalized patients who did

not receive shock therapy and the newer drugs?" It may be more meaningfully and completely stated this way: "What differences in improvement (as defined by social adjustment) can be observed in follow-up between a patient group treated by hospitalization only, and a patient group treated also by shock therapy and the new drugs?" This presents the theme in a nutshell, with clarification of details following, as the criterion of "social adjustment" is defined, as "modern therapies" is defined, and as "hospitalization only" is defined. This also brings up the problem of such misleading terms as "spontaneous remission" which in my opinion have no place in research thinking. The term implies that the "hospitalization only" group received no treatment, which of course is not true, since T.L.C., removal from environmental stress, etc., are recognized as important agents in remission. What the study compares, then, is not treatment versus no treatment, but two different kinds of treatment. It is obvious that the research team was aware of this, but did not communicate it plainly.

My third point deals with use of the literature. The study was well conducted under considerable handicap presented by the unscientific nature of data which has originally been collected for clinical purposes. If we are to get anywhere in research at this point in our scientific development, we must do *ex post facto* studies. Many writers have given much thought to these problems. Earnest Greenwood has written a whole book on the subject, *Experimental Sociology, A Study in Method*, which is an important reference for psychiatric research workers, although it was written in a sociological framework. In his book, *The Uses and Abuses of Psychology*, E. J. Eysenck discusses the problem in the framework of studying the effects of psychotherapy. Among other things, he emphasizes precision of definition, and the problem of equating control groups.

My fourth point, control of variables, involves the problem of identifying all the factors that might influence the results of the study. First, there is the matching of the two groups. The great number in this study helps to compensate for this, but not

entirely. The "hospitalization only" group were ill during a post-depression and war period. Were there more temporary stress reactions that one would expect to subside in this group, and more chronic cases in the second treatment group? In other words, was severity and length of illness a factor? This could distort the data enough to justify the necessary library work to check this factor, even though going through incomplete records is difficult and time-consuming.

The criterion of "social adjustment" seems dependable and well defined, as does the grading system. However, the fact that one social worker made all the judgments involved an important distorting variable.

Insufficient consideration was given the diagnostic inconsistencies. For example, the "involutional melancholias" represent a large and also highly selected group which today might have been diagnosed more in terms of underlying personality patterns, be they depressive, hysterical, or anxiety-stress. There may be little we can do about assessing the extent and direction in which this might change the data, but knowing the variable exists, we must be careful in interpreting the data. Essentially, this is what we must always do with variables that cannot be controlled. There are others. How would the "E" grade group have influenced the data if they had been followed up; many of them may not belong in the "E" group. What about the sizeable number of lost cases, who by virtue of deserting their previous surroundings may represent more instability?

In order to avoid being discouraged, and declaring "Research is impossible!" we cannot allow these unanswerable questions to deter us. However, we cannot, knowing their existence, draw firm conclusions from the results. We must interpret our data cautiously in the light of the possible extent and possible directions all these uncontrolled variables could take in changing the results. In my opinion, the results of Dr. Hastings's study give us trends, which should be carefully studied with smaller groups; we do not yet have facts but we have made progress toward learning them.

STUDIES IN ULCERATIVE COLITIS^{1, 2}

GEORGE J. MOHR, M.D.,³ IRENE M. JOSSELYN, M.D., JEANNE SPURLOCK, M.D.,
AND S. H. BARRON, M.D.

In 1952, under the stimulus of Margaret Gerard's preliminary studies of the genesis of psychosomatic symptoms in infancy, her observations as to the significance of differences in maternal behavior in the care of children, and her conviction that psychosomatically ill children observed were consistently cared for by "mothers who were narcissistic and uninterested in the child, except as a self-enhancing asset," and that "each child presenting a psychosomatic disorder had experienced frustrated dependency at a stage when body needs are dependent upon the mother for satisfaction," a program for investigation of these disorders was instituted at the INI by Drs. Margaret Gerard and Francis J. Gerty of the University of Illinois Department of Psychiatry. Gerard (1) early emphasized similarities and postulated differences in the ego deficiencies in psychotic and psychosomatic disturbances in children. Just as the pathology in the early mother-child symbiosis is recognized in the psychotic disturbances in childhood, so it appears to have a significant etiological role in psychosomatic illness. The suggestion was made that in psychosomatic disturbances, maternal care may have been adequate generally, but that traumatic events focussed attention and libido investment upon the functioning of specific organ systems. Traumata producing the ego deficiencies of the psychosomatically ill child, however, would occur during the same period as that which determines psychotic disturbances.

With these considerations in mind, a special ward for psychosomatically ill children was established at the Illinois Neurological Institute. The organization plan and the program for observation and treatment of the children under study have been described elsewhere (2).

In essence, the hospital ward is designed to provide a total therapeutic milieu for children also in individual therapy. It permits observations of the child, individually and in relation to the group, by a number of observers, nurses, pediatrician, teacher, occupational therapist, psychologists, the psychiatrist on duty in the ward, and the individual therapist. These multiple observations can be pooled or compared, offering some measure of check and validation of observations and of inferences or conclusions drawn from them. It also provides an opportunity to observe the child's response to an environment that is designed to meet his emotional needs in a different and more adequate way than they have been met heretofore.⁴

The present paper deals only with limited areas of observation. It is based upon the study of 6 cases of ulcerative colitis in children ranging, at time of admission, from 7 to 11 years of age. Three of the children have been discharged as improved or symptom free, 2 are still in treatment on the ward, and one is being treated on an ambulatory basis. We confine ourselves to (a) characterization of the parents and the parent-child relationship as this may have bearing upon the child's illness, and (b) comment on the nature of conflict situations related to the illness.

MOTHERS OF ULCERATIVE COLITIS PATIENTS

The following description of relationship of the mothers of the patients to their own parents, their emotional orientation to pregnancy and the initial care of the children under study, is based upon material gathered in frequent interviews with the mothers during the period of hospitalization of the child.

1. Mrs. A.—This mother of an 11-year old boy patient was reared in a relatively stable family. The maternal grandmother was occupied with farm chores rather than in individual family care. The mother helped, but tried to avoid these duties. She

⁴ A later communication will describe the methods utilized and the observed response both psychologically and physically to these experiences.

¹ Read at the 113th annual meeting of The American Psychiatric Association, Chicago, Ill., May 13-17, 1957.

² From the Dept. of Psychiatry, University of Illinois (Head: Dr. Francis J. Gerty).

³ Mt. Sinai Hospital, 8720 Beverly Blvd., Los Angeles 48, Calif.

was more identified with the activities of the maternal grandfather who was active in community and public affairs. Pregnancy was deferred for 7 years, conception taking place shortly before the father left for over-seas service. He did not return until the child was 15 months of age. Owing to pregnancy she was ill, lost weight that she never regained. After the delivery, there was a mild depression. Nursing was painful and frustrating; "breast feeding takes you down." She stated that when she fed the child during the first year, her mind was "a thousand miles away" since she thought chiefly of her husband.

The mother has been possessive but uncertain and inconsistent in her demands upon and expectations of the patient. She has alternately pushed him toward accomplishment and then limited his activity because of anxiety lest his illness be aggravated.

This mother suffered the traumatic experience of the death of her sister from tuberculosis and of her father from carcinoma, and has become sensitized to chronic illness that she has again been faced with by her son's illness. She developed a colitic condition during her father's illness. A reaction to the patient's illness is to work actively outside the home.

The mother's defense against the traumatic effect of the chronic illnesses of sister, father and son is an emotional distancing and detachment.

2. Mrs. B.—This mother was reared by a widowed, cold, controlling, manipulative mother who "prescribed" what she thought best for her two daughters. The mother and her only sister were trained to be independent and self-sufficient. The grandmother was socially and intellectually ambitious, but never was experienced by the mother as protective or understanding. The mother was determined to do a better job of rearing her daughters than her mother was able to do. She had a good relationship with a step-father, her father having died shortly after her birth.

This mother insisted upon pregnancy despite serious financial difficulties and prolonged psychological illness of her husband on return from service. She was healthy during pregnancy, though she had nausea, and worked as a nurse until the 9th month. She stated she felt happy with her baby who suffered with colic, but otherwise was healthy. The husband would have deferred having children. His paranoid reactions and inability to keep a job imposed great burdens upon the mother.

This mother is controlling, managing, domineering, essentially like her own mother in relation to her children. She is dutiful rather than affectionate. She is ambitious and capable of carrying considerable responsibility. She expects superior performance from her two daughters.

3. Mrs. C.—This mother of a 7-year old girl was hostile toward an unaffectionate mother who demanded much of her, exploiting her and several husbands in self-seeking material gains. Her father was the second of the grandmother's 4 husbands. Mrs. C's deceased, idealized father represented the fantasied source of comfort and happiness denied

her in real life. Deceased and surviving step-fathers were highly depreciated.

Her first pregnancy, which was with the patient, was long delayed, partly on realistic grounds. The mother experienced devastating narcissistic distress at birth of the patient on discovery of her inability to be an abundantly lactating and nursing mother, as her mother was reputed to be. "I felt the bottom drop out of everything."

At birth of a second daughter, a severe dyshidrosis of the hands distanced her from all aspects of child care for months. In compensatory fashion she overstressed all child care procedures, stuffing in feeding, overactive in imposing patterns of cleanliness, overexposing her own person and that of the father for presumably sexual educational purposes.

Much competition and hostility was directed toward the paternal grandmother who lived in the same building and who competed with the mother in feeding and indulging the patient with consequent turmoil and quarreling in the household, the child exploiting the rivalry between the mother and grandmother.

4. Mrs. D.—This mother of a 10-year old boy patient presented a basic attitude of hostile dependency upon her mother and upon an older sister, feeling repudiated and depreciated by the domineering grandmother who favored the prettier older sister.

As a child, she made great but unsuccessful efforts to win the grandmother's love and approval by being helpful to her in the care of younger children in the household, and by academic achievement.

The patient was a replacement for a mentally defective first-born son who was finally placed in an institution, after much conflict on the part of the parents, during the mother's third month of pregnancy with the patient. The mother continued to feel guilty about the placement of the elder son and later both parents were fearful that the patient, too, would prove to be intellectually retarded. Even after the patient's birth, the mother continued to be preoccupied with the idea of a replacement for the institutionalized child. When the patient was 4 years of age, the mother applied for foster-home placement of a girl in her home, but she was dissuaded by the social agency. Throughout her pregnancy the mother worked, was highly ambivalent in her attitude toward the pregnancy, was "emotionally upset" throughout this period, and gained weight enormously. She was excessively anxious about having anyone handle the child on return from the hospital, and attempted nursing for a two-month period. On giving up breast feeding she became quite ill, ran a fever and felt quite detached from the child. He suffered colic which she attributed to the breast feeding.

The mother feels responsible and guilty about the child's illness, and was openly blamed for it by the paternal grandparents. She makes ineffective effort to safeguard, control and manage, unconsciously sabotaging her effort and frustrating both herself and the child.

5. Mrs. E.—This mother of an 8-year old girl patient is a child-like and dependent woman who nevertheless was able to play a sustaining role in family life until the birth of the patient. She has felt unable to win her mother's approval in face of unfavorable comparison with a younger brother.

The patient is the youngest of 7 children. Pregnancy with the patient was considered "the last straw" by the mother who had attempted to maintain family life with an alcoholic, brutal, paranoid, periodically deserting husband. An attempt to leave him at the time of the patient's birth and to return to her parents was frustrated by their rejection of her. Near-starvation conditions obtained in the home during the patient's first year of life, during which time she was continuously ill and not expected to survive. Indulgence and care of the patient by older siblings provided sustaining elements in the environment.

This mother and the patient as a new-born infant were literally exposed to threat to life and to brutality by the father, and to physical hardship. After the child was 3 years of age, the mother worked and care was provided primarily by a sister only 5 years older than the patient.

6. Mrs. F.—The mother of a 7-year old boy patient was an only child. She had longed for a sister whom she demanded of the maternal grandmother. She was overindulged in a material sense by a severe, dominating and exacting grandmother. The maternal grandmother preferred business life, although there was no financial need, and left the mother in care of maids.

The mother was reared in an atmosphere of Prussian authoritarianism. She was exposed to social isolation, discrimination, physical hardships, and death of family members in Nazi Germany. Her pregnancy with a daughter, 5 years older than the patient and also with the patient were unplanned and considered untimely by the parents who were concerned about financial security.

The mother offered cold, mechanical care to the patient, but seemingly related herself to the first child, the daughter, in terms of identification in which her own dependent needs and wish for maternal care and for a sister were met. She wished to have girls only. The death of the daughter when the patient was 18 months of age disturbed the mother's relationship to the patient, whom she stated she would have wished to die rather than the daughter. She, in effect, abandoned him to the care of others by going to work after the death of his sister.

No difficulties about early feeding were reported, but the mother characterized the patient as restless and aggressive in infancy, less responsive and cuddly than his two younger brothers later proved to be. She found it difficult to hold him with comfort, and felt guilty about this. The mother was strict in her training procedures; the child responded with temper tantrums, but yielded to the mother out of fear of punishment. He cried a great deal, and on one occasion, when 3 years of age, the mother taped his mouth to stop his crying.

MOTHERS IN RELATION TO MATERNAL GRANDMOTHERS

All 6 of the mothers of the ulcerative colitis patients felt that they had experienced a lack of maternal warmth and care from their own mothers. The grandmothers were characterized as cold, severe, domineering, controlling, unaffectionate. In the best of these relationships (Mrs. A.) the maternal grandmother was a busy wife whose domestic activity was directed more toward feeding farm hands and toward chores than care of her children. The mother aided in the farm duties with much protest.

The mothers quite consistently felt unable to win the love and approval of their mothers and have felt depreciated by them. They made great effort to win the grandmother's love by attempts to gratify her social ambitions (Mrs. B.) catering to the grandmother's self-gratifying demands (Mrs. C.), or by helping in the care of younger children (Mrs. D.). None of these mothers felt successful in this effort. They remained consistently in a hostile-dependent relationship with the grandmother.

Competitive reactions toward the grandmother take the form of determination to do a better job in child rearing (Mrs. B.), or more specifically, of doing as well as the mother in nursing and feeding care (Mrs. C.). None experienced mothering in their own childhood that would have helped them to develop effective patterns of mothering on their own part.

PREGNANCY AND POST PREGNANCY EXPERIENCE

Three aspects of the mother's experience of maternal care and of pregnancy and reactions to it seem important. First, the mothers themselves had minimal gratification in their relations with their own mothers, despite strenuous, but unsuccessful effort to win maternal love. Secondly, they see the world as a dangerous place in which one survives only as a result of one's own efforts. These efforts are felt to be potentially ineffective because of fantasied self-deficiency. Thirdly, at the time of the birth of the particular child who develops ulcerative colitis there is some event, either in the external life or

relating to the pregnancy that disturbs the mother's emotional economy so that the little she is capable of giving maternal care is further lessened.

FATHERS OF ULCERATIVE COLITIS PATIENTS⁵

1. Mr. A.—The father, a self-employed millwright is a small man the same size as his wife. His father, whom he physically resembled, died when he was 16. His capable mother cared for him and a younger brother. The father, smaller than his younger brother, compensates for his somewhat depressed position by a measure of aggressiveness, adopting a depressive attitude toward his wife. His interests and activities are masculine. He is fairly active in his work, does hunting and fishing and outdoor life. He is often in the position of providing care in the home, preparing meals because of his wife's work program and because of the irregularity of his own work, which is dependent on securing projects with intervals between jobs.

2. Mr. B.—This father was the youngest of 4 children, 2 of whom died in childhood. The paternal grandparents were poorly adjusted in their relationship. The father was an unwanted child to whom parents gave very little. He was slow in development and presented feeling problems. He is much like the paternal grandmother, unaffectionate and not interested in other people.

The father was in service at time of marriage. He was nervous and irritable, but one year after the marriage he was sent overseas in the Pacific area for two years. According to the mother, he was "mentally ill" on his return from service. He was hostile toward the mother, felt the world was against him, had 10 to 12 jobs during the 6 years following his discharge from service. He has been working for an automobile manufacturing company on government contracts for the past 3½ years.

The passive, dependent father is a compulsive individual who consciously compensates for slowness in working by an effort to do better work than others. He is concerned lest his daughter, the patient, be as slow as he is. He does not consider himself to be the head of his family, just "one-fourth of the family." His recovery from the traumatic effects of his war-time experience, which at worst did not unduly expose him to danger, has been very slow.

3. Mr. C.—This father of a 7-year old girl patient is a passive, compliant man, more conforming to the demands of his parents than was his 5-year old sister. The paternal grandfather drank heavily, but was financially successful. There were many scenes of quarrelling between the grandparents, the grandmother nagging, the grandfather drinking and fighting back. The father relates poorly to people in general, but does relatively well in working independently, repairing electrical equip-

ment. He has substituted for the mother in providing care for the children at times when she has been depressed, and when suffering the dysphoria of the hands that prevented her from offering care. In physical care and bathing of the patient, he has been most seductively involved in close physical contact and bodily exposure, partly under the influence of the mother's expectations. He only lately rebelled against the mother's stuffing, controlling activities in relation to her two daughters.

4. Mr. D.—This father suffers with ulcerative colitis which began 1½ years before his son became ill. The third of 8 children, he was reared by a protective, cautious, active, hard-working managing mother. The paternal grandfather strove to be independent, but was quite unsuccessful in providing for his family. He was religious, restrictive and authoritarian. The father was in a highly conflictful relationship with an elder brother who depreciated him and in relationship to whom he developed a peculiar "nervous system." When there were difficulties with his brother, saliva accumulated and he had to spit a great deal.

The father felt the paternal grandmother favored the one brother who had advantage of college training and a sister who made a marriage involving social prestige. The father is the least successful of the siblings. An early rebelliousness gave way to a tendency to submit and avoid difficulties. He quit school during the first year of high school because of difficulties with one school subject. He considers his relationship with his wife difficult, but regards her as more intelligent than himself and identifies the patient, who does well academically, with the mother.

The father has been weakly compliant in a situation in which he feels constantly at a disadvantage, depreciated, and dependent; namely, in working for relatives who do not appreciate what he does and expect too much from him. He is highly conforming, compulsively meticulous and punctual about his work. He is unaggressive, readily yields at even the thought of a fight, turns the other cheek. He is upset by disapproval, and his physical symptoms are aggravated by the arguments and quarreling with his wife. The onset of his ulcerative colitis symptoms was at a time when he failed in the only effort he made to emancipate himself from his dependent situation by undertaking an independent business enterprise. The father's lack of feeling of self-confidence and his self-depreciation are somewhat offset by his insistence upon the excellent quality of his work so that, though a slow worker, he feels himself to be indispensable to his employers.

Three of his 4 brothers have been much more successful than he, and he is "not in the same class" with his employer-relatives. His eldest son is feeble-minded.

His need to please and to give is evident—a masochistic element is indicated in his readiness to give blood donations. His hypersalivation when irritated with his elder brother is a pregenital con-

⁵ Limited material is available relative to the fathers of the children studied.

symptom. His character structure is of regental oral and anal nature.

Mr. E.—This father is a pathological character: alcoholic, brutal, dependent, incompetent, homosexual. The paternal grandfather was married 3 times, and had 24 children. Father has been violent and threatening to the mother, he has stood over her with a knife as she lay in bed with the patient as an infant. He periodically

of drinking 3 years before the patient's birth, often had to be accompanied to work as a truck driver by his wife. He began drinking again after the patient was born and did not quit for 7 years, remaining ugly and threatening. He has been the mother of infidelity, of lesbianism, of incestuous relations with her sons. He has imposed himself in rapist fashion on the mother in the presence of the patient and there is unconfirmed evidence of his having attempted physical seduction of the child. A son, 13 years older than the patient, died in status epilepticus in a state institution.

Mr. F.—Early this father experienced the relative security of a middle class German Jewish mercantile family in Germany. He was a well-loved and indulged child. Two sisters and a brother were victims of Nazi atrocities, dying in concentration camps. The father is an emotionally unstable person who remains absorbed in his work, devotes relatively little time or attention to his family and offers little warmth or affection. His attitude towards his parents remains compliant and deferential. He emphasizes the need to be independent and self-sufficient. There was a considerable struggle to establish financial security during the earlier years of his marriage. He represents to his wife a much kinder and thoughtful person than her severe father was, despite his lack of warmth.

The limited material about the fathers does not permit generalizations about their possible relationship to the illness of the children. Three of them are, or have been psychologically ill. Mr. B. was mildly paranoid and had great difficulty for 6 years in establishing himself in work after return from military service. Mr. D. suffers with ulcerative colitis. He maintains a precarious hold on security in a protected and depreciated work situation where he is employed by relatives. Both Mr. B. and Mr. D. defend themselves against feelings of self-depreciation and inadequacy by compulsive devotion to their work and emphasis upon the superior quality of their performance on their jobs. Mr. E. is alcoholic, paranoid, and was physically violent and brutal, particularly at the time of the patient's birth and early infancy.

None of these 3 fathers had provided ma-

ternal or paternal gratification, but also to provide gratifications not attained in family life. None of these fathers can be considered to have offered emotional support to the mother and child. The father's role in the illness of the child is secondary to that of the mother.

Mr. D. was a very sensitive person, but was in the position of feeling identified with a depreciated father. He presents conflicts and defenses that are identical with the father's.

Mr. A. is most nearly an adequate father to his son. Despite a lack of warmth, the father's masculine interests, in which he included his son, led the boy to conceive of a father as an admirable masculine figure with whom he became identified. This boy presented the mildest of the cases of ulcerative colitis included in this study. He advanced more rapidly than the others in psychotherapy and became free of symptoms in a short time without recurrence to date.

Mr. C., during his daughter's infancy and early childhood, was unable to meet the mother's expectations of him in caring for the child, and as a result the mother took the full care of both children. The mother was unable to enter his life. He was rebellious against the mother's relationship with his daughter that was established by the mother's active rejection of him, and of the father's relationship to the child.

Mr. F.'s aloofness and emotional distance have been noted. Despite its limitations, the relationship between the parents has remained an acceptable one offering gratification to both. The patient, however, has been the most seriously ill of all the patients, with the most extensive pathology.

The indications are that the father's relationship to the illnesses of the children studied is secondary to that of the mother. As in Case 5, Mr. E., the father may play a major role in determining the unfavorable conditions that provide the setting conducive to and provoking the onset of the illness. In this case, his direct brutality made it impossible for the mother to meet the child's needs. Even here, however, the father's

contribution to the disturbances experienced by the child is mediated through the mother.

The relatively benign attitude of Mr. F., did not protect the son against the traumatic experience in which the death of the patient's older sister incapacitated the mother in her relation to the patient.

It is interesting that the mothers, in describing their husbands, tend to vacillate between indicating the husband's adequacy and their dependence upon him, and a sense, whether justified or not, that the husband is really incapable of fulfilling his role and the mothers must either overtly or covertly manage the husbands if security is to result.

SUMMARY

In keeping with observations reported in previous studies, the mothers of the ulcerative colitis patients had experienced a lack of warmth and maternal care. Their mothers consistently were characterized as cold, severe, domineering. They all felt they had failed to win love and affection despite serious effort to do so. While hostility toward their disappointing mothers is apparent, their dependency and great sense of insecurity, masked by compensatory patterns of independence and self-sufficiency, is more marked.

Toward their children, patterns that superficially seem not unlike those of their own mothers are evident, in that they too seem to be domineering and controlling mothers. Where it has been possible to observe this pattern more closely (Mrs. D., Mrs. F. and Mrs. A.) it has been seen that this effort at control is motivated by deep fear that failure will have disastrous consequences. The potential disaster stems in part probably from their own destructive wishes toward the child, *e.g.*, Mrs. F.'s death wishes toward and fear of the patient's death. The effort at control proves to be unsuccessful and the mother suffers the narcissistic pain, anxiety and discouragement of a sense of failure in her actual inability to meet the child's needs as her mother had failed to meet her needs. Anxiety stems from the feeling of lack of support and acceptance by their mothers initially and by the later reality of lack of

supporting figures, chiefly the husband. Mrs. E., who had previously cared for 5 children, was finally overwhelmed by the brutality of the alcoholic father who physically threatened her life. She unsuccessfully attempted to withdraw from the situation entirely.

The mothers then, are anxious and fearful persons who desperately and unsuccessfully attempt to control in a situation in which they feel adequate support is not exercised by dependable parental figures. Their anxiety is augmented by their sense of inadequacy to meet demands made upon them and by the actual failure to provide for their own dependent needs and those of the child. The illness of the child eventually serves for them as a confirmation of their own inadequacy and of the undependability of the environment.

The role of the father as a factor in the determination of the illness is more variable than that of the mother. His ability or inability to emotionally support the mother in her maternal role is a basic consideration. Some of the fathers failed in this respect, but were ill, dependent, relatively incompetent in solving the problems of practical living. In one instance it was felt that the father's destructiveness was the chief factor in rendering the mother incapable of meeting the child's needs.

A relatively benign relationship of the father toward the mother and child will not necessarily protect the child against illness when the mother's disturbance is dependent upon traumatic experience not primarily related to the father. Yet the presence of a father with qualities favorable for resolving the childhood conflicts toward him, in keeping with normal emotional growth and development, would appear to influence the course of the illness favorably.

A CHARACTERISTIC SITUATION OF STRESS FOR THE CHILD WITH ULCERATIVE COLITIS

The limited capacity of the parents of a child suffering from ulcerative colitis to meet his needs is repeatedly emphasized in the study of all the patients. The children react characteristically with efforts to meet their own needs. The stressful nature of a typical situation, and the reaction to this stress, may

be illustrated by the case of David D., Case No. 4, and of his mother.⁶

His family situation and parents have been briefly described. It may be recalled that the patient was conceived as a replacement for an older, mentally defective brother who was institutionalized when the mother was in the third month of pregnancy. The father, who himself suffered with ulcerative colitis, was employed by his more successful relative in a situation in which he felt depreciated, defending himself by pride in the quality of his work. David's illness began with bloody diarrhea when he was 10 years of age, while at a summer camp. His mother had felt quite uncertain about permitting him to go, but was persuaded by a friend to do so. His symptoms became more severe on beginning school in September. He was admitted to the ward early in January, 1955. The course of his illness has been moderately severe, his general condition remaining good.

Mrs. D. had reacted to the placement of her first son in an institution with depression. She was apprehensive about the possibility that the patient also might be mentally deficient, and during the pregnancy, stopped smoking and carefully watched her diet to avoid anything that might possibly be injurious to the child. She gained 43 pounds during the pregnancy.

During psychotherapy, the mother's deep conviction of her inadequacy to care for her son and her apprehension about this, became apparent. The infant had had a persisting diarrhea, beginning at the age of 10 days, and colic that persisted for 3 months. The nurse's inquiries about the mother's food served to intensify her feelings that she damaged the child by eating improper food and that her breast milk was injurious to him. He was placed upon a bottle at age of 3 months. From then on he was fed usually with the bottle propped. The child cried almost continuously according to the mother during the first 3 years. The mother refrained from picking him up to comfort him lest she "spoil" him. Later she felt guilty with the feeling that she had neglected him. Throughout this trying period, as well as later, the mother felt the father to be constantly critical of her methods of handling the child, but he did not offer any constructive help.

This mother had made great effort to win her mother's affection by helping her in the care of the younger siblings. Her efforts were neither appreciated, nor rewarded. She concluded that her mother thought her stupid because she spent so much time with the younger children. Her childhood feeling that her older, more attractive sister was the only one loved by the mother continued into later life; she felt, too, that this sister's husband was the only dependable man in the family circle and was strongly attracted to him.

The mother's complaint about the father was continuous. She recalled how upset he was during her pregnancy with the patient, attributing this to the fact that she was unable to work and earn money while pregnant. The father's symptoms of ulcerative colitis became aggravated when there was the possibility that she might again be pregnant. She resentfully recalled the many ways in which she was called upon to provide for him, or for the family, receiving little support or gratification in return. As example, she supplied the bonus required for the rental of an apartment, but her husband became ill and had to be hospitalized just when they moved into the apartment. Instances in which both her parents failed to offer her needed support and encouragement were repeatedly stressed. On all sides, she felt deprived and frustrated with respect to her strong-dependent needs and longings.

The mother constantly struggled with the feeling that she was not capable of meeting the expectations of others. This applied equally in her earliest feelings about maternal functioning and later apprehension about her functioning on jobs. She often felt overwhelmed by the demands made upon her. She expressed the wish, in an exchange with her son, that she might change places with him and have a nurse care for her and give her enemas.

The mother's feelings toward the father were of a smoldering hostility that frequently flared into open anger, so that there was much quarreling. The mother resented what she felt to be her husband's effort to control her, while at the same time contributing so little to her comfort and security. The parents could agree on no common course of action even in planning a vacation. Their vacation time was spent in fruitless effort to find and agree upon rental of an apartment. The mother resented the father's sexual demands, but at the same time threatened to "go out with the first colored fellow who comes along" when irritated by his nagging.

The mother was quite incapable of protecting her son from any of her anxieties, which at times reached the intensity of panic, nor from her rage. When the child was 5 years of age, she was unable to cope with her anxiety about a hemorrhoidectomy she required, so that the child became acutely anxious. She fully communicated her anxieties about her ability to meet the requirements on her job to her son. At the same time, she felt he was disappointed if she did not work. Her son shared her apprehension and was openly critical of her for her failure to keep the house clean, particularly the kitchen. She was fearful of her own hostile feeling toward the boy, reacting with great guilt and apprehension when she slapped him during a visit home. The child was fully exposed to the quarrelsome scenes between the parents, tending to side with the father. Increased bleeding from the bowels was observed at times when the boy was exposed to the hostile exchanges between the parents. The mother felt hopelessly caught between the father and son in her fruitless effort to meet the demands of each.

⁶Treatment of David was carried out by Dr. Melvin Schwartz, Institute for Juvenile Research, that of his mother by Dr. F. Lage, Institute for Juvenile Research and Healy School, Chicago.

The patient has been permitted week-end visits home, following which his reactions to the contact with his parents often became apparent in the succeeding therapeutic hours.

The following summarizes material from two brief periods of David's individual therapy hours.

Following a visit home (in August, 1955), the patient evidenced anxiety pertaining to the activity of the mother who made anxious efforts to entertain him. He was under great pressure, trying to get in many activities during his visit, but without enjoying any of them in a relaxed fashion. He was realistically concerned that he would be taxed by his parents' lack of planning. He verbalized the feeling that the hospital was more protective than his home. At the same time, he was envious of what the mother might be doing for other children. He expressed concern that if he went out for luncheon with the therapist something especially good would be served that day on the ward.

The patient expressed concern (a) about the mother's working—she had decided to return to work after a considerable period at home—(b) about her ability to hold the job as a typist since she was out of practice, (c) about her ability to get telephone calls through to him, and (d) about the possibility of continuance of his mother's therapy now that she would be working. He attempted to assume responsibility for making arrangements about his mother's therapy hours.

The patient was concerned about the quality of what he would be given, whether food is good or harmful, and was concerned about his mother's ability to control this. He reacted to his insatiable demands with guilt feeling, expressed in concern about the cost of cokes he was allowed to have and with guilt feeling about receiving so many toys since he had become ill.

Just before a period of exacerbation in June 1956, the patient was dealing in his therapy with ambivalent feelings in relation to strong oral-receptive wishes, presenting a defense against fantasies of incorporation and being devoured. This was in the form of fantasies about the newer fish in his aquarium eating the older. An active attitude of providing self-protection, fantasies about leadership in athletic prowess, and interest in the nature of nutritive and other bodily processes were prominent. Accumulating and conserving were emphasized. At this juncture, following a week-end visit home, an exacerbation of physical symptoms occurred, and David returned to the ward depressed, and concerned that he had lost weight though he had eaten a lot at home. During the following hours of therapy, the nature of this experience became clear.

His mother had pressured him at home to eat. He resisted, argued, finally yielded, later vomited. His father supported him in this argument, but the argument then continued in connection with the question of who should take him back to the hospital. First, each parent insisted that he would,

then insisted that the other take him. David was upset by the argument, could not eat.

The problem of the father's inability to find a long-sought apartment for the family had concerned David, and his anxiety about this was again aroused. David visited an apartment with the father, the mother thought the kitchen too small, later when the father returned to rent this apartment the rent had been raised \$10.00 per month, so that it could not be secured.

David reported a discussion between the mother and maternal uncle about the father's inability to pay rent. The mother spoke in most depreciatory terms about the father, commenting on his unwillingness to get a better job during the war, as she had wished him to do. David defended his father, stressing the fact that he had worked so hard at one job for 30 years. He wished he could help his father.

The mother had complained to David that he wanted to do only what *he* wanted. He wished to rest downstairs at his uncle's home, his mother thought he should rest upstairs. She then complained that he seemed to follow her around rather than do things for himself. The confusion as to his mother's expectations of him was apparent. One moment she thrust unwanted food at him, insisted that he conform to her every demand, then complained if he did not act independently.

Everything had gone wrong over the week-end. A scooter he had worked on long and hard broke. On Sunday his mother forgot passes for the baseball game; they had to go back home to get them; no seats were left at the game, but eventually they got some. They stayed for the second game, but he was worn out by the third inning and they had to leave.

The child suffering with ulcerative colitis is involved basically with a stressful situation in which he feels threatened with the possibility of being overwhelmed by demands that overtax his capacities. He experiences the efforts of the mother to care for him, or her lack of so doing, as inadequate to meet his needs. This inadequacy of the mother to meet the child's needs is first experienced in infancy, as indicated by the many evidences of the mother's inability to respond to the pregnancy and post-pregnancy period with comfort, acceptance and security. The *biological security* of the child initially is threatened by her inability to care for him. Both mother and child are anxious about his survival, and the reactions of both to this basic threat are characterized by intensity and sense of urgency. The child's anxiety and hostility evoked by this failure to achieve needed security and gratification later is expressed in fantasies about the in-

competent and destructive nature of the mother and of the dangerous or poisonous nature of food provided for him. This apprehension can be displaced to all persons and situations involved in his care. The initial and basic apprehension about the mother readily extends to the father, particularly when the latter in reality does not play a decisive role in meeting the mother's and child's need for security and support, emotional and material.

The child's response to his awareness of parental inability to meet his needs, as seen in the children under treatment, is concern about the practical problems of daily living that are not adequately met by parents who are inconsistent, indecisive, and vacillating. The response is an effort at independence, and a striving or overstriving to himself meet the needs not adequately met by the parents. He attempts to protect and provide for them as well as for himself. His overstriving is also determined by his effort to meet the demands of parents who turn to the child for accomplishments that would provide them narcissistic gratification. This constitutes his bid for the approval and love of the parents, particularly the mother.

The fluctuations in the course of the illness are related to the stress under which the child operates in response to the threats to his security and to his feeling of success or failure in his striving to meet the demands made upon him.

During the course of therapy, subjective state of depression, sense of inadequacy and helplessness can be correlated with increase of stress related to current increase of anxiety about the parents' or the child's inability to cope with typical reality situations. This evokes anxiety and hostility toward the parent that have been experienced many times previously in reaction to the earlier indications of the mother's inability to protect and provide for the child. Frequently, this state of stress is associated with exacerbation of physical symptoms, whether of bleeding and diarrhea, or of general physical depletion. The overstriving of the child suffering with ulcerative colitis is really a life saving maneuver, since it is evoked by the fantasied danger of abandonment to destructive forces, maternal or environmental, and by current

experience implying this same danger. The experience is one in which one or both parents again betray their inadequacy to solve a current problem relating to security. This is responded to by the child's compensatory effort to assume the controlling parental responsibility and/or by augmentation of symptoms indicating inability, failure or helplessness in attaining a solution.

Our observations pertaining to the basic psychological factors characteristic for the child suffering with ulcerative colitis are in keeping with the reconstructions made in the study of adult ulcerative colitis patients.(3).

They indicate that the pessimistic outlook and tendency to give up on the part of the adult patient is the end result of a long series of childhood disappointments in which he repeatedly has experienced the traumatic effects of the ineptitudes of the parents, initially of the mother, in meeting basic biological needs. In the children studied, the integrative effort, the defensive pattern of attempting to assume responsibility for self, and in some measure for the parents, is impressive. Inability to maintain this effort is correlated with onset or exacerbation of bowel symptoms.

SUMMARY

1. All the mothers of the children suffering with ulcerative colitis studied reacted to their failure to win the love of their own mothers, with varying feelings of inadequacy and ineffectiveness about their own maternal role, or with defenses against these feelings.
2. The world is seen by them as a dangerous place in which one survives only by one's own effort. They develop patterns of control, motivated by fear of the disastrous consequences of failure. The efforts are felt to be potentially ineffective because of the fantasied self-deficiency.
3. Events in the external life, or relating to the pregnancy with the child who develops ulcerative colitis, are such as to further lessen the mother's ability to function as a giving mother, because of her emotional depletion and decreased energy.
4. The pregnancy and period of early care of the child is experienced as damaging to the mother, undesirable or otherwise reacted

to narcissistically, rather than with gratification in meeting the needs of a child.

5. The illness of the child serves for the mother as a confirmation of her own inadequacy and of the undependability of the environment.

6. The father's ability or inability to support the mother emotionally is a basic consideration. His influence is primarily mediated through the mother, but it may be a principal factor in rendering her incapable of meeting the child's needs.

7. The indications are that the biological security of the child initially is threatened by the mother's inability to care for him.

8. Fantasies about the inadequate and destructive nature of the mother, and of her nurturing effort, express the child's hostility and anxiety evoked by the failure to achieve needed security and gratification in his relationship with her.

9. As observed in the cases under treatment, the child's response to parental inability to solve problems of living, and to meet needs, is an effort at independence and a striving to himself meet the needs not adequately met by the parents.

10. The overstriving of the child suffering the ulcerative colitis is a life-saving maneuver, evoked by fantasied danger of abandonment to destructive forces, maternal or environmental.

11. Failure in the compensatory effort to assume parental responsibility himself is associated with augmentation of symptoms and feelings of helplessness.

BIBLIOGRAPHY

1. Gerard, Margaret W.: Genesis of psychosomatic symptoms in infancy. In: Deutsch, F. *The Psychosomatic Concept in Psychoanalysis*, New York: Internat. Univ. Press, 1953.

2. Mohr, G. J., Richmond, J. B., Garner, A., and Eddy, E. J.: *A Program for the Study of Children with Psychosomatic Disorders in Emotional Problems of Childhood*, Caplan, G. ed. New York: Basic Books, Inc.

3. Alexander, F.: *Acta Psychotherapeutica*, 3: 291, 1954.

DISCUSSION

GEORGE L. ENGEL, M. D. (Rochester, N. Y.)—I am most pleased to discuss this valuable study, for it fills an important gap in our knowledge of this

disease. It is generally accepted that the relationship with the mother is of critical importance in the psychological development of these patients, but to date, the information about the mothers has come mainly from the patients and it has been difficult to know whether the consistency in the descriptions of the mothers and of the mother-patient relationship is a reflection of the common psychology of the ulcerative colitis patient or whether it truly indicated a close similarity among these mothers. This study would seem to support the latter.

Now when we compare the characterization of the mothers of my patients, based on information obtained from patients, with the grandmothers of Dr. Mohr's patients, based on data supplied by the mothers, we find a striking similarity. Indeed, the two descriptions could be interchanged without any difficulty. This provides a striking confirmation of Therese Benedek's concept that not only does the child incorporate conflicts of the mother, but that when becoming a mother herself, the same conflicts may be reawakened in relationship to her own child. It is well borne out in the authors' direct observations of the mothers. Further, these investigators' description of the mothers also fits remarkably well with my description of the adult ulcerative colitis patient. And, of course, the same dynamics are quite obvious in the children with colitis.

These findings are very similar to Greene's findings among children with leukemia and their mothers. He points out that many of the mothers had suffered loss and depression either during the pregnancy or early infancy, a finding which seems also to have been true in some of the mothers in this series. Greene suggests that object loss at this time may have a significant effect on the developing relationship with the child, who may be dealt with by the mother as a projected image of the mother's lost object. This may seriously limit how the child can then relate to the mother since, as is clear in both the colitis and leukemia material, the child has to assume a surrogate ego role for the mother if it is to survive. This greatly intensifies the symbiotic part of the mother-child relationship and places both mother and child in great danger of loss. It is in the setting of loss that the organic disease develops.

This brings me to the last point, namely, what determines who, in the chain of generations, is the one to develop ulcerative colitis (or leukemia or any other organic disorder)? Clearly, from the psychological side, one might postulate that grandmother, mother or child might all be equally vulnerable candidates. We can be sure that the one father with ulcerative colitis had sought and found his mother in his wife. I would be interested in the authors' speculations on this point. My formulation follows the conceptual model of Arthur Mirsky who postulates a pre-existing biologic determinant, developmental psychological determinants, and a current external situation. All three are necessary and all three must operate together to be the sufficient condition.

A CONTROLLED STUDY OF THE SHORT-TERM DIFFERENTIAL TREATMENT OF SCHIZOPHRENIA¹

WERNER SIMON, M.D.,² ROBERT D. WIRT, PH.D., ANNE L. WIRT, PH.D.,
ALDEN V. HALLORAN, M.S.W., ROBERT G. HINCKLEY, M.D.,
J. BENJAMIN LUND, M.D., AND G. WENDELL HOPKINS, M.D.

INTRODUCTION

The number of papers published in the past few years on the use of tranquilizing drugs has reached several hundred. Most reports are of a clinical nature and represent the personal impressions of the clinician in a certain number of psychiatric patients, without attempt to control any of the many variables which can and do distort therapeutic results and make valid conclusions sometimes impossible. Few controlled studies have been reported, although progress in research methodology has been considerable. For a drug or treatment method to be evaluated scientifically today, the use of modern research techniques is essential. Among these are random sampling, an adequately matched control series, ratings by a group of independent judges, objective behavior rating scales, psychometrics, statistical evaluation of results, and the double-blind method in drug research.³

SURVEY OF LITERATURE

A survey of the literature shows that few controlled studies have been attempted and published. From these it is at once apparent that considerable variability exists with regard to patient selection, number of patients, cross matching, dosage schedules, clinical evaluation, use of different behavior rating scales, techniques in the double-blind method, and conclusions drawn by the investigators. From the evidence available, however, it may be stated that chlorpromazine appears to be of definite value in hyperactive hospitalized patients, and that the drug produces beha-

vioral changes which can be objectively measured within 1-4 weeks, as shown by the studies of Sommerness, Lucero *et al.*(1) and Winter and Frederickson(2). Whether or not chlorpromazine facilitates psychotherapy, needs further study, although Newbold and Steed(3) found the drug useful as an adjunct because it reduces excessive anxiety. The question of dosage also remains unsettled and requires additional investigation, some authors(4) recommending massive doses, while others(5) favor much smaller dosage for effective treatment. The effect of the drug in children and the aged has yet to be established conclusively by better controlled experimentation.

Investigations with regard to reserpine indicate that the initial research done by Kline(6) showed promise with particular reference to the treatment of schizophrenia. While several authors(7) became very enthusiastic, calling the drug "the greatest discovery in the history of psychiatry," it fell upon subsequent investigators to test its efficacy further. Better controlled studies revealed either limited value(8), or showed that reserpine has no significant effect on the behavior of long-term disturbed schizophrenic patients, regardless of dosage(9, 10, 11). However, there appears to be some evidence of tranquilizing properties of the drug in psychoses as well as neuroses, and its blood-pressure reducing action is well established.

While several studies(12, 13) favor chlorpromazine over reserpine for a more effective response in hyperactive behavior, no conclusive results have heretofore been published comparing these two drugs in the treatment of schizophrenia, as tested in a controlled, matched study with objective, statistically significant multi-dimensional measurements. Naidoo(14) has compared reserpine with electroconvulsive maintenance therapy and found it to be superior in severely ill, long-term schizo-

¹Read at the 114th annual meeting of The American Psychiatric Association, Chicago, Ill., May 13-17, 1957.

²From the Psychiatric Service, VA Hospital, Durham, N.C., and the Department of Psychiatry and Neurology, University of Minnesota Medical School.

³A. L. Marks, M.A., for the statistical analysis.

phrenics. However, his "blind" method of clinical evaluation is questioned because of the readily observable side effects of the drug. Boardman *et al.*(15), comparing chlorpromazine with insulin coma therapy, consider chlorpromazine as their treatment of choice in schizophrenia in view of the shorter hospitalization period, the lesser danger and subjective unpleasantness for the patient, and the lack of advantage which insulin coma therapy appeared to show in their investigation. Alexander and Bindelglas(16), on the other hand, recommend that treatment with insulin coma or electroshock, when indicated, should not be delayed in patients who do not respond to drug therapy, since they believe valuable time may be lost.

All these reported treatment results will have to be confirmed by adequate follow-up studies. The difficulties inherent are clearly reflected in the insulin follow-up investigations of Bond(17). Therefore, any claims of chlorpromazine achieving 88% social remissions in schizophrenia, as made by Kinross-Wright(18), without controls and independent judgments, cannot be accepted without further research. The magnitude of the problem of outcome in schizophrenia, based on the natural history of the illness, has been brought into sharp focus through the long-term follow-up study by Hastings, Hathaway and Bell(19). Serious questions also have been raised concerning the value of placebo administration in blind, controlled investigations by Wolf and Pinsky(20). Donnelly and Zeller(21) have called attention to their observation that the best remission rates have been achieved by the drugs in disorders which are episodic in nature and are known to be self-limiting in time, and that these are the same conditions which either remit spontaneously or respond to electroshock. We agree with Hoch(22) that better evaluation of psychiatric therapies can be accomplished only by improved methodology, better agreement as to criteria of improvement, more adequately controlled experimental design, fewer reports on observations of a testimonial nature rather than on scientific, factual evidence, and more adequate follow-up studies.

EXPERIMENTAL DESIGN

Nevertheless, many of these studies do indicate that both chlorpromazine and reserpine are of benefit in the treatment of psychiatric patients; but no single research has compared the efficacy of both drugs with other treatments, with the spontaneous remission rate, and with each other for one pure diagnostic group. Furthermore, no study up to this time has employed methods of measurement which include such multiple approaches as psychiatric evaluation, psychometric examination, and social case study; and none included an adequate follow-up study. We sought to evolve a design which would include all of these factors. In order to do so, we decided to select all patients admitted to the Minneapolis VA Hospital with a clear diagnosis of schizophrenic reaction, without complicating organic findings, who had received no previous treatment for schizophrenia. All ambiguous cases were excluded from the study.

As schizophrenic patients were admitted to the hospital and the diagnosis confirmed, they were assigned to one of 4 treatment groups on a random basis until 20 patients had been included in each of the 4 groups, giving us a total sample of 80 patients, none of whom had been treated previously for schizophrenia. The staff was kept ignorant of the order within the random list. The 4 experimental groups included: 1. clinical judgment; 2. chlorpromazine; 3. reserpine; and 4. hospital routine.

Each patient in the clinical judgment group received whatever treatment seemed indicated in the best psychiatric judgment of the staff and the patient's physician. All treatments in current psychiatric practice, such as electroshock therapy, insulin coma therapy, psychotherapy, various drugs, etc., were available. In effect, this group constituted a kind of control group representing all current treatment methods, against which the results in the drug groups could be compared. The other control group we called the hospital routine group. This group received no specific medical or psychological treatment other than hospitalization. The results from the drug groups could be compared against the spontaneous remission rate found in the hospital routine group. The other 2

groups were treated with chlorpromazine and reserpine, respectively. The chlorpromazine group received a minimum of 200 mg. per day. The reserpine group received a minimum of 2 mg. per day. No maximum dosage was set by the design. These groups specifically were not given any other treatment during the evaluation period. All groups had equal opportunity to participate in routine hospital activities, such as occupational and manual arts therapy, and special services programs.

All patients were studied on admission by psychiatric examination. Psychometric evaluation included a behavior rating schedule, which had shown validity in studies by Moore(23), Degan(24), and Wittenborn(25); the Minnesota Multiphasic Personality Inventory (MMPI); and the Shipley Institute of Living Scale of Intelligence (Shipley-Hartford). The social case study provided material for ratings on 12 prognostic factors found to have stability in studies by Pascal(26), Schofield(27), and others; 4 social history factors each with 5 rating scales published from a factor analytic study by Beck and Nunnally(28); and a scale of occupational adjustment. In addition, the usual data of age, education, marital status, etc., were recorded for a total of 62 variables.

The period of evaluation was set at 30 days, since the literature indicated that both chlorpromazine and reserpine have a measurable effect by the fourth week, and a remission which could reasonably be called spontaneous should occur within that period of time. After this 30-day period the patients were re-evaluated on the measures used at admission and were rated on a 9-point scale for improvement. A rating of "1" on this scale was given for patients who were psychiatrically worse, a rating of "3" indicated no change in the schizophrenic process, a rating of "5" was for slightly improved, a rating of "7" meant moderately improved, and "9" was given for complete remission. We considered a rating of about "7" as indicating sufficient improvement for possible hospital discharge.

These ratings were made by the entire research team after a complete review of the case by the patient's therapist and an inter-

view with the patient by the research group. This group included the chief of the psychiatry and neurology service, the chief of psychiatry, one staff psychiatrist, one staff psychologist, the supervisor of psychiatric social work, and a consulting psychiatrist and consulting psychologist.

Following the 30-day evaluation, we could compare the results on all of our measures, including the degree of improvement, among the 4 groups. After this evaluation, patients were given whatever treatment seemed indicated if they had not improved sufficiently for discharge. At discharge the patients were again compared on our various measures, and one year following discharge were evaluated for the final time. Our analysis is not yet complete for the discharge and follow-up periods, and this report covers only the 30-day evaluation period.

RESULTS

First we shall examine our sample and the tests for actual randomness. A total of 62 variables were included and 61 of them were found to be randomly sampled and normally distributed over the 4 groups of patients as shown in Table 1. These are:

TABLE 1

Age
Education
Number of siblings
Marital status
Number of children
Occupational adjustment
Religious status
Occupational status
Four social history factors
IQ
Days of treatment
Two MMPI validity scales
Ten MMPI clinical scales
Twelve prognostic rating items
Twenty-three behavior rating items

Only one variable was not randomly and normally distributed over the 4 groups. The validity scale K on the MMPI was slightly but significantly smaller at the 5% level of probability for the clinical judgment group and the hospital routine group, than for the other groups. However, this deviation from randomness has little statistical significance, inasmuch as this kind of deviation would

happen by chance once in 20 times, and since far more than 20 variables were considered, the chances of one of them happening by chance not to be random is in itself a chance occurrence. Clinically the K scale is considered allied to measures of ego-strength. Thus the 2 control groups could be viewed as somewhat "handicapped," relative to the two drug groups, by virtue of their lower mean K scale score, while the reserpine and chlorpromazine groups could be regarded as incidentally slightly favored by their higher mean K scores.

The following is a description of the total sample of 80 patients: there were 56 paranoid, 16 undifferentiated, 4 simple, 2 schizoaffective and 2 catatonic schizophrenic reactions. In terms of means and percentages the "average patient" would be described as about 31 years old, single, Protestant, having had 4 siblings, a fair to good occupational adjustment, and having been employed in an unskilled or semi-skilled occupation group. In terms of the social history factors the average patient was said to have had a father who was not interested in his child, to have suffered from parental lassitude, indifference and inadequacy, and to have been rendered well-behaved, dependent and helpless outside the family situation due to over-protection on the part of the parents. The average patient had a 12th grade education. His intelligence was average (mean IQ 103.3), but his intellectual functioning was not efficient (CQ 79.5). The average patient was

treated for 32.7 days prior to the first evaluation. The average MMPI profile is shown in Figure 1. This profile is characteristic of patients having a diagnosis of schizophrenic reaction. A patient with such a profile would be expected to have a thinking disorder and to be anxious, apprehensive and dysphoric. In terms of the prognostic ratings, the average patient was more active than apathetic. He was oriented, extra-punitive, had an onset of illness of at least a year or more, and had mild stress precipitating his illness so common as to be considered ordinary life stresses. The average patient was rated as having had poor deportment in school. In his hospital adjustment he tended not to be passive or conforming. He had had previous episodes of emotional difficulty, not diagnosed as schizophrenia, and had ideas of reference prior to his admission to the hospital. The behavior rating schedules show that on admission the average patient was delusional, hallucinatory, shut-in, and had ideas of reference and disturbances of thought and speech.

In the chlorpromazine group the highest dosage of the drug given was 1200 mg. per day, with an average dose of 400 mg. per day. For the reserpine group the largest amount was 16 mg. per day, and the average dose was 6 mg. per day. The clinical judgment group received the following types of treatment: 6 patients had insulin coma therapy with an average of 19 treatments, including 10 comas. One of these patients received small doses of chlorpromazine concomitant to the insulin. Three of these patients were in intensive individual psychotherapy, and the other 3 were given supportive psychotherapy in addition to insulin. Electroshock therapy was given 11 patients, 4 of whom received chlorpromazine in addition to EST. The number of treatments ranged from 4 to 12, with an average of 8 grand mals. Two of the EST patients were in intensive psychotherapy, while 6 were given supportive therapy. One patient was carried on reserpine and supportive psychotherapy, one received chlorpromazine and supportive psychotherapy, and another patient in this group was treated with intensive psychotherapy plus chlorpromazine.

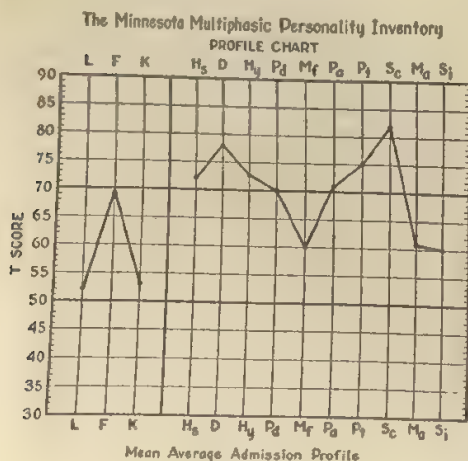


FIG. 1

On 30-day evaluation our results were as follows:

1. Behavior Ratings

The behavior rating scale numbered 23 items. An individual's "score" could vary therefore from 0 to 23. Each patient was rated on admission and re-rated after 30 days of treatment. On admission the average number of symptoms checked for all patients was 6.3. At the time of the 30-day evaluation this figure was 4.8, which is significant at the 5% level. Thus all patients showed some average decrease in behavioral symptomatology. Considering the 4 groups separately, the figures are shown in Figure 2. The clinical judgment, the chlorpromazine and the reserpine group all show a statistically significant degree of improvement, while the hospital routine group does not. The symptoms which decreased with statistical significance over the entire 80 patients were hallucinations, homicidal tendencies and manifest anxiety. The occurrence of some of these symptoms was not frequent to begin with, but even so they decreased more than other symptoms. Obviously, these three symptoms are of a kind which would lead to hospitalization. Homicidal tendencies occurred in 15% of our patients on admission, and in 3% at evaluation; hallucinations in 55% on admission and in 31% at evaluation; while manifest anxiety was observed in 41% of our patients on admission and in 20%

after 30 days. It should be mentioned that some symptoms, such as euphoria, destructiveness and disorientation, could not show statistically significant improvement after 30 days, since they occurred so infrequently at the time of admission.

2. Improvement Scale

This represents the major finding of our study. Evaluation after 30 days revealed an over-all difference between all groups, compared with the time of admission, which was significant at the 1% level. Thus the degree of total improvement could not have occurred more than once in a hundred times by chance. The improvement scale ratings for the 4 separate groups are shown in Figure 3. Both the clinical judgment group and the chlorpromazine group were significantly improved over the reserpine and hospital routine groups, at the 1% and 5% level, respectively. The chlorpromazine group and the clinical judgment group are not significantly different from each other. The reserpine group and the hospital routine group are not significantly different from each other either. One could conclude from this result, then, that after 30 days of treatment reserpine is no better than hospital routine, and clinical judgment is no better than chlorpromazine. For the short-term treatment of one month in schizophrenia the value of chlorpromazine over reserpine is definitely shown.

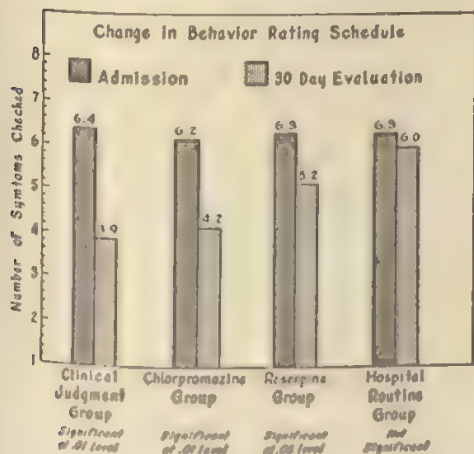


FIG. 2

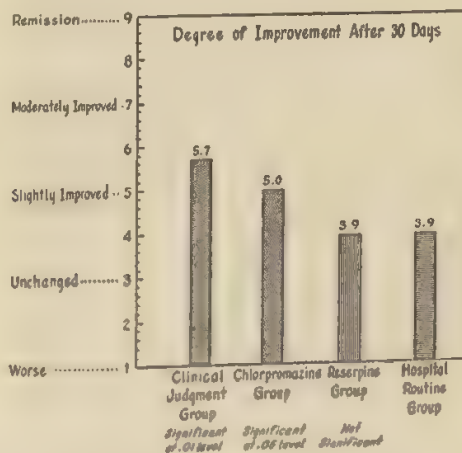


FIG. 3

3. Psychometrics

The Shipley-Hartford was used to estimate IQ. It was administered before treatment was begun and after 30 days of treatment. For the total group the results were as follows: on admission the average IQ was 103, with a range of 70 to 141; on evaluation the average IQ was 110, with a range of 75 to 141. Over-all there was a slight gain in the average mean IQ, and the range narrowed somewhat. The Conceptual Quotient, which is an estimate of intellectual efficiency, increased on the average, but remained below the optimal level. These changes, however, are not of statistical significance.

The average admission MMPI profile for all 4 groups was shown in Figure 1. It is a profile characteristic of a schizophrenic reaction. The average admission and 30-day evaluation MMPI profiles for each of the 4 groups are shown in Figures 4, 5, 6 and 7. You will note that none of the 4 groups of admission profiles differed from the average admission MMPI profile of the total group of 80 patients.

The Clinical Judgment Group.—This group is greatly improved in their MMPI performance after 30 days of treatment. Every clinically important scale shows some lowering in elevation. The changes are statistically significant on the following scales: the F scale, the Hypochondriasis scale, the Depression scale, the Hysteria scale, the Paranoia scale, the Psychasthenia scale, the Schizophrenia scale, the Social Introversion scale. The scales not showing significant change (Psychopathic Deviate, Masculinity-Femininity, and Hypomania), are those which would be least expected to change, since they are measures of attitudes and character, more than they are measures of symptoms, mood and emotional or ideational disturbance. The MMPI results show that marked benefit resulted from the type of treatment given the clinical judgment group. The average evaluation profile would not be considered schizophrenic in type, although it would suggest some psychological discomfort.

The Chlorpromazine Group.—As a group, these patients also seem improved, as reflected in their MMPI performance, but they

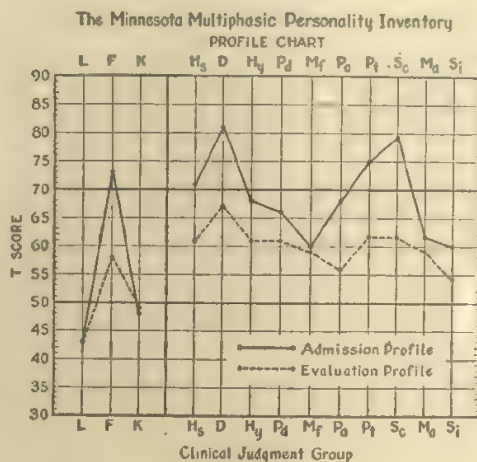


FIG. 4

are not as much improved as the patients in the clinical judgment group. The only major significant change is in the Paranoia scale, indicating that after 30 days of treatment with chlorpromazine these patients did not say as many obviously psychotic things about themselves. The profile, however, is still schizophrenic in type.

The Reserpine Group.—Here the MMPI at evaluation shows very little change over the admission profile. The only scale to decrease significantly is the Social-Introversion scale. This result would suggest some improvement in socialization and degree of comfort with other persons. The profile continues to be schizophrenic in type.

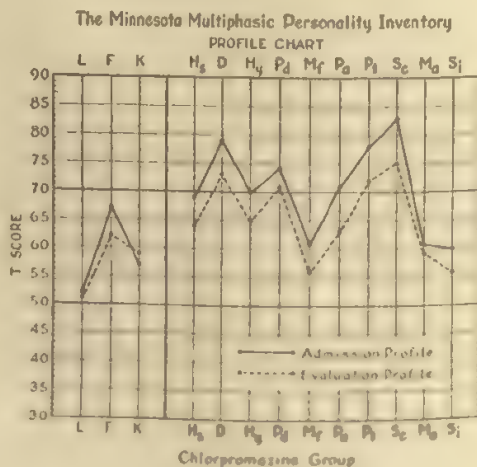


FIG. 5

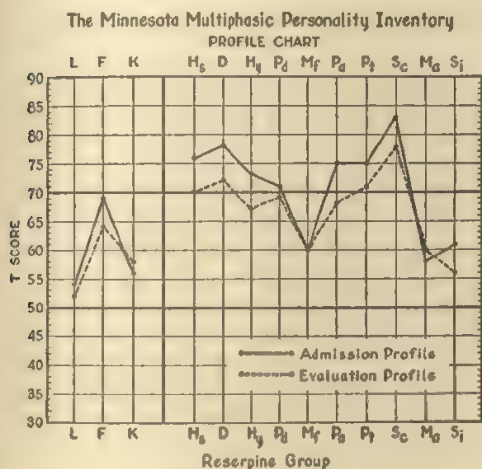


FIG. 6

The Hospital Routine Group.—In this group, no MMPI scales showed significant change. There is, as in the other group profiles, a slight decrease in absolute scores. Such a decrease has been found by Rosen (29) to be characteristic of a re-test in a hospital population. The profile remains schizophrenic in type.

4. Prognostic Factors

It is noteworthy that of the total group of 80 patients only 15 showed moderate improvement to complete remission, while 30 failed to improve or were rated as worse. The remaining 35 patients were rated as minimally to slightly improved. Thus we

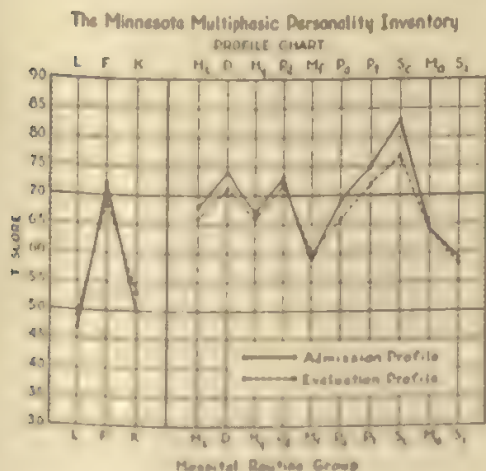


FIG. 7

had twice as many patients unimproved as showing definite improvement.

In comparing previous occupational adjustment in these 2 groups, we found that the unimproved patients had the least satisfactory, whereas the improved group had a better occupational adjustment.

When the social history factors in the two groups were compared, there was strong evidence that patients who improved had over-protective mothers, while those who did not improve had disinterested and promiscuous or debauched fathers. A history of being studious and well-behaved during school years was associated with a tendency toward lack of improvement, whereas "kicking up one's heels" in school tended to be prognostically good, as has been shown in other studies (27). Mothers who could become angry, and otherwise were considered inconsistent in their discipline, tended to be prognostically better. Perhaps their children were more likely provocative, rather than withdrawing in type.

Of the 12 prognostic rating items, only 2 were found to be statistically significant, and these were in agreement with findings by Pascal, *et al.* (26). Improved patients had a relatively precipitous onset and a shorter duration of illness, whereas unimproved patients had a relatively insidious onset and a longer duration of their illness. Practically all our patients had only minimal precipitating stress. This could be interpreted to mean that minor ordinary stresses in life can precipitate schizophrenia because the ego of the schizophrenic is not strong and mature. Or it could also be argued that stress of these types is not a factor at all in this disorder.

In summarizing all these prognostic indicators, one might say that with 30 days' hospital treatment, the patients who had a greater tendency to improve had good employment records, had protective possessive mothers, did not have disinterested, promiscuous or debauched fathers, had an acute onset with minimal precipitating stress, and a short duration of their illness prior to admission.

DISCUSSION AND SUMMARY

Our results suggest that those treatments, including the new drugs, which after careful

diagnostic study are specifically prescribed for the unique needs of the individual patient, are the best treatments. Thus the clinical judgment group revealed the relatively most favorable treatment results, as indicated by the behavior ratings and the clinical improvement scale, and especially the MMPI findings, which reflect a far greater quantitative relief from symptoms than in the other 3 groups. Therefore we consider it premature to discard such treatments as insulin coma, electroshock and psychotherapy, in favor of the tranquilizing drugs, as has been recommended and has become actual practice in many hospitals. However, what is an even more impressive finding, is that this study re-emphasizes (at least for short-term treatment) that schizophrenia is exceedingly resistant to any form of treatment, and also that in some cases whatever treatment is used results in some slight improvement. Although we find twice as many patients unchanged or worse after 30 days, as are moderately or greatly improved, the average rating for all groups shows slight improvement regardless of method of treatment used, including the use of no special therapy at all. Beyond this our results indicate that chlorpromazine, a relatively inexpensive and easily administered form of treatment, does almost, but not quite as much, good for the short-term relief of symptoms, as do the more intensive and complex therapies such as insulin coma, electroshock and psychotherapy. We also find that reserpine, in this period of time, has little more beneficial effect than hospitalization alone. It will remain for subsequent phases of our study, by analyzing our discharge and follow-up data, to determine the longer range responses to all of these techniques.

Our findings suggest that regardless of the type of treatment given, some factors are more indicative of prognosis than others. These confirm earlier reports that rapid onset with short duration is prognostically favorable, as is a good former occupational adjustment, and that those patients with sufficient ego strength to act out in their environment appear to have a better treatment probability than those who react with withdrawal and conformity. Furthermore, in our study, those patients whose early life was

beset by hostile and rejecting fathers are least likely to recover, while those with mothers who, though inconsistent in their training methods, were nonetheless sources of protection and strength, have favorable prognoses. However, for this short period of time, many factors long believed to be prognostic do not have value.

Finally, we find some consistency in our data. The patients who improve show the improvement in many aspects: in psychometric tests, in ward behavior, and in clinical interview; while those who remain most schizophrenic fail to show demonstrable improvement in any of these areas.

BIBLIOGRAPHY

1. Sommerness, M. D., Lucero, R. J., Hamlon, J. S., and Mahowald, A. M.: *Dis. Nerv. Syst.* **18**: 1, 1957.
2. Winter, W. D., and Frederickson, W. K.: *J. Consult. Psychol.*, **20**: 431, 1956.
3. Newbold, H. L., and Steed, W. D.: *J. Nerv. & Ment. Dis.*, **123**: 270, 1956.
4. Rockmore, L., Shain, L., and Funk, I. C.: *Psychiat. Quart.*, **30**: 189, 1956.
5. Kehoe, M. J., and Pollard, J. C.: *J. Nerv. & Ment. Dis.*, **123**: 275, 1956.
6. Kline, N. S.: *Ann. N. Y. Acad. Sci.*, **59**: 107, 1954.
7. Noe, R. H., Williams, D. B., and Rapaport, W.: *J.A.M.A.*, **158**: 11, 1955.
8. Pearl, D., Vanderkamp, H., Olson, A. L., Greenberg, P. D., and Armitage, S. G.: *Am. J. Psychiat.*, **112**: 936, 1956.
9. Sommerness, M. D., Lucero, R. J., Hamlon, J. S., Erickson, J. L., and Matthews, R.: *Arch. Neurol. & Psychiat.*, **74**: 316, 1955.
10. Swenson, W. M., Gislason, S., and Anderson, D. E.: *Arch. Neurol. & Psychiat.*, **76**: 60, 1956.
11. Penman, A. S., and Dredge, T. E.: *Arch. Neurol. and Psychiat.*, **76**: 42, 1956.
12. Shepherd, M., and Watt, D. C.: *J. Neurol., Neurosurg. & Psychiat.*, **19**: 232, 1956.
13. Zeller, W. W., Grafiagnino, P. N., Cullen, C. F., and Rietman, H. J.: *J.A.M.A.*, **160**: 179, 1956.
14. Naidoo, D.: *J. Nerv. & Ment. Dis.*, **123**: 1, 1956.
15. Boardman, R. H., Lomas, J., and Markowe, M.: *Lancet*, **2**: 487, 1956.
16. Alexander, S. P., and Bindelglas, P. M.: *Dis. Nerv. System*, **17**: 220, 1956.
17. Bond, E. D.: *Am. J. Psychiat.*, **110**: 561, 1954.
18. Kinross-Wright, V.: *Psychiat. Research Reports I. Am. Psychiat. Assn.*, p. 53, 1955.
19. Hastings, D. W., Hathaway, S. R., and Bell, D.: *Univ. Minn. Hosp. Bull.*, **23**: 149, 1951.
20. Wolf, S., and Pinaky, R. H.: *J.A.M.A.*, **155**: 339, 1954.

21. Donnelly, J., and Zeller, W.: *J. Clin. & Experim. Psychopath.*, 17:180, 1956.
22. Hoch, P. H.: *Am. J. Psychiat.*, 112:241, 1955.
23. Moore, T. V.: *Am. J. Psychiat.*, 9:719, 1930.
24. Degan, J. W.: *Psychometric Monogr.* No. 6, 1952.
25. Wittenborn, J. R.: *J. Consult. Psychol.*, 16:13, 1952.
26. Pascal, G. R., Swenson, C. H., Feldman, Dorothy A., Cole, May E., and Bayard, Jean: *J. Consult. Psychol.*, 17:163, 1953.
27. Schofield, W., Hathaway, S. R., Hastings, D. W., and Bell, Dorothy M.: *J. Consult. Psychol.*, 18:155, 1954.
28. Beck, S. J., and Nunnally, J. C.: *J. Psychiat. Social Work*, 22:123, 1953.
29. Rosen, A.: *J. Consult. Psychol.*, 17:217, 1953.

DISCUSSIONS

NATHAN S. KLINE, M. D. (Orangeburg, N. Y.).—In this paper a statement in the introduction reads: "For a drug or treatment to be evaluated scientifically today, the use of modern research techniques is essential. Among these are random sampling, an adequately matched control series, etc." Their survey of the literature points out some of the defects in other studies. Even with this knowledge the authors are aware, I am sure, that some aspects of their study were less adequate than they would have desired. I will not refer to the one-month duration which is less than the time recommended by most authors for really meaningful changes to occur, nor will I discuss the dosage level which is below the generally accepted level (*i.e.*, the one I believe is necessary) for effective action. Also, I will not make the point that these drugs are not generally accepted as useful for *all* types of schizophrenia but primarily for agitated, excited behavior and the authors have not so selected their patients which is like evaluating the effectiveness of aspirin in patients who do not have fever or pain. Nor is it necessary to point out the skewed distribution of VA patients because of prior selection for eligibility in the the armed services.

I would like to point out the variables which we know to be minimal and the minimum requirements for such a study as Dr. Simon, *et al.* have undertaken.

1. Social service studies should be undertaken with regard to all potential variables for a study in which treatment is being evaluated to return them to their normal level of functioning. This study must be designed to include all patients who will be left in the hospital who can only be listed as "well enough to leave the hospital but need further care."

2. Complete physical (including laboratory examination), psychiatric, and psychological examination of all patients at the beginning and end of the study and at intervals in between to observe future reactions.

3. Large-number statistics is 30. The authors have only 20 per group. To have 30 patients in

each group means there should be 120 instead of 80 patients. We know that excited, agitated patients do better than quiet ones so equal groups of each type of patient should be included—this will raise the total number of patients to 240. Controls will be needed for both the excited and the non-excited patients which will raise the total number by 25% to a total of 300 patients.

We know that the ratio of side effects has about a 3:1 female-male sex ratio. The present study is therefore biased on this subject and a comparable group of females must eventually be done, raising the number of patients to 600. There is evidence that reserpine works best on patients hospitalized 2 to 5 years so that the comparison does not allow the drug to be tested under optimum conditions. To do this would raise the number to 1,200 patients. If careful experimental design is used there are techniques by which this could be reduced to half or even slightly less. There undoubtedly exist a great variety of other variables, not all of which could be handled by analysis of variants. The ages of the patients, the relationship between past social history, drug used and therapeutic response, to give only one example, are not described or investigated. The morphology of the patients, their marital status, their ethnic background, etc., are not referred to.

4. The patients after being followed for the minimum 6-month observation period should be given the benefit of at least one year of treatment (some of our chronics have required 2 years). One month is brief—I would hate to have my own psychotherapeutic ability evaluated on the basis of one month of treatment. A post-treatment period of observation is mandatory since we have observed that in reserpine, and others have found the same true with chlorpromazine, there is frequently a therapeutic lag, *i.e.* the patient shows his most significant improvement in the month following the withdrawal of medication.

5. Of those patients who are discharged: is their remaining out of the hospital more than extension of hospital care? Again, social service investigation is essential. Again, a battery of social workers augmented by psychiatric interview-follow-up is essential.

6. I have not even mentioned the batteries of psychological, physiological, biochemical and other data which would appear desirable (at least to the psychologists, the physiologists, and the biochemists).

7. Techniques of statistical analysis must then be applied to the total data.

The authors have moved from the usual study which is only perhaps 5% adequate to an investigation which is perhaps 7% adequate. This is not the most important thing, however, what is important is the awareness of the inadequacy of our present techniques and the effort to do something to improve conditions.

LEONARD H. MARCOLIS, M. D. (Burlingame, Calif.).—These data purport to compare various therapeutic methods in comparable groups of previously hospitalized schizophrenic patients under controlled conditions, and to do this after a 30-day

period of treatment. Therein lies my principal criticism, as it is virtually impossible to determine the efficiency of any type of treatment in schizophrenia within the short span of 30 days.

In order to evaluate and compare various methods of treatment, each method must be applied in such a fashion as to extract its full potential. There are limits beyond which any specific treatment should not be extended but, short of this, it must be applied as vigorously and for as long a period as is necessary to obtain the desired result.

It is generally recognized that in the case of ECT, treatment should not be abandoned as incapable of bringing about a full remission until at least 20 treatments have been administered over a 7 to 9 week period, and that even more intensive and prolonged treatment is often indicated. In contrast, the 11 patients who received ECT in this study were given only 4 to 12 treatments and averaged only 8.

The accepted practice in regard to insulin coma therapy is to consider an adequate course one which requires 9 to 11 weeks and comprises 50 comas. Furthermore, if the clinical course does not appear to be satisfactory by the time the 25th or 30th coma is reached, this serves as an indication to combine ECT with insulin coma therapy. In contrast, the 6 patients given insulin coma therapy in this study averaged only 10 comas.

Even under the most optimal conditions treatment results in schizophrenia leave something to be desired, and every possible step should be taken to insure that the chosen therapeutic method is fully exploited. This is particularly true in the case of chlorpromazine, where experience has taught that in many patients the dosage necessary to effect rapid and sustained improvement cannot be reached, or maintained, without producing distressing and incapacitating side effects, and that adequate dosage is impossible to achieve unless ancillary medications are utilized to combat these undesirable side effects. If a clinical remission is not forthcoming at levels such as the average of 400 mg. or maximum of 1,200 mg. per day used in this study, more vigorous treatment is in order. Dosage must be raised until the desired clinical response is obtained or the patient's tolerance is reached, this tolerance being meanwhile boosted by the concomitant administration of stimulants, anti-parkinson agents and other compounds to control troublesome side effects. It is only with dosage regulated according to this "as vigorous as necessary" principle, which in certain patients, might require double the maximum dosage used in this study, administered for double the length of the study, that it is possible to ascertain the full limits of the therapeutic effect of chlorpromazine. In this connection, it is interesting to note that the total dosage advocated over a 38-day period in the reference (4) quoted in this paper as recommending "massive" chlorpromazine dosage is equivalent to the amount which might be required over a 4-day period of "as vigorous as necessary" therapy.

Reserpine therapy is inferior to chlorpromazine and has been abandoned to a considerable extent by those in the vanguard of psychopharmacotherapeutic

research. However, more prolonged administration would be desirable with slightly higher dosage than the average of 6 mg. daily used in this series, before concluding that the treatment is "no better than hospital routine."

Despite these criticisms this study is an important one. Controls are established, a variety of validating techniques is utilized and follow-up studies are being conducted. From it will be forged a strong link in the chain of knowledge regarding treatment and research in schizophrenia.

WERNER SIMON, M. D. (Minneapolis, Minn.).— I appreciate the stimulating comments of Drs. Kline and Margolis. Our research group does not share Dr. Kline's belief regarding the inadequacy of our present-day techniques in doing fruitful research. Dr. Kline does not seem to be familiar with modern statistical methods; e.g., small sample statistics. Our data have been analyzed using statistics appropriate for our samples. If Dr. Kline had read our study more carefully, he would have found that repeated psychiatric and psychological examinations had been done, and that age and social history factors, as well as marital status, were indeed investigated. As indicated in our paper, follow-up evaluations were included in the design, but have not been completed. Our research patients received the same attention with regard to discharge planning and post-hospitalization care as is given all our patients. It is claimed by Dr. Kline that reserpine is most effective in excited, agitated patients who have been hospitalized 2 to 5 years, although it has been shown in well-controlled studies by Sommerness, Lucero and others (9, 10) that the drug does not effect a behavioral improvement in hyperactive chronic state hospital patients. Dr. Kline admits that frequently there is the "most significant improvement" in patients following the withdrawal of reserpine. Is this possibly a sign that the drug is not effective and that patients are better off without it?

We agree with Dr. Margolis that our 30-day period of treatment was an arbitrary limit and not long enough to determine the outcome of a complete course of treatment. However, in our setting we felt we could not justifiably withhold indicated treatments from our patients longer than 30 days. Prepaid insurance plans (e.g. Blue Cross) also often impose the same limitations for patients in private hospitals. We thought it was more important to control length of treatment, in order to make valid statistical comparisons with spontaneous remissions occurring in the Hospital Routine group. Dr. Margolis advocates pushing chlorpromazine to the toxic level in the treatment of schizophrenia. We see no particular value in this, because to expose patients to severe toxicity does not necessarily achieve the desired clinical response in improving schizophrenia, but may lead to a shift in emphasis away from the treatment of schizophrenia toward combating the toxic side-effects. However, we agree with Dr. Margolis that reserpine is inferior to chlorpromazine, and believe that we have objective evidence to that effect in our study.

ON SOME PRINCIPLES OF THERAPY¹

SYDNEY G. MARGOLIN, M.D.²

In order to formulate principles of psychotherapy, data from individual instances must be organized in accordance with a given systematization of human psychology. Without this obvious procedure it will not be possible to state whether a given psychotherapy will be rational or metaphysical. Even in psychoanalysis where therapy has the status of formal discipline, there are many discrepancies between theory and practice which remain to be clarified. Research methods which combine non-psychoanalytic disciplines with psychoanalysis in the investigation of troubled human behavior and its psychotherapy have been especially valuable, such as, for example, the direct observation of infants and children along with psychophysiological, psychosensory and psychosomatic research.

There are many difficulties in verifying data of psychotherapy and in supporting a given hypothesis by means of which the data are selected and given strategic significance. Prominent among these is the difficulty and perhaps impossibility of designing so-called classical experiments. Statistical studies correlating both a psychotherapeutic procedure and a physiological illness with results cannot be made satisfactorily in our present state of uncertainty and lack of agreement about the definitions of the variables involved. Ever present also is the methodological question as to whether or not the contents of the therapy of a given individual should constitute the data, in which case we have innumerable items of information; or whether only the total situation, *i.e.*, an individual case, may be admissible as a datum, in which case the sparseness of our information causes it to be trivial. In this connection it is pertinent that the far reaching impact and diffusion of psychoanalysis were based on the study of a relatively small number of patients.

The general tendency, however, is to acquire that quality and quantity of information which will have a high order of internal consistency within a given frame of reference. This is most commonly done by the clinical method of psychoanalyzing patients. Recently, experimental methods have been used based on repeated observation of segments of mental processes such as perception, various auditory and visual recording devices, multiple observers, and suggestion, to mention a few. It should be emphasized, however, that such efforts to make psychotherapy rational seek to establish verifiability and validity within a relatively closed system such as psychoanalysis³ and that it was the hypotheses and theories of psychoanalysis

³ Such shortcomings in our comprehension of the therapeutic process are not limited to psychiatry. How often can we say that theory and practice among the non-psychiatric specialties are thoroughly consistent? It might be further asked, how many specifics in therapy do we have for the vast array of entities listed in our standard nomenclature? There was a period when insulin in relation to diabetes was considered by some as a model for the comprehension of a disease and its specific treatment. With time, however, the prematurity of this conclusion has become all too apparent. Even those drugs which empirically have established their value, such as digitalis and quinine are not specific and, in any case, their origins in relation to medicine are steeped in magic and fantasies remote from present day theory.

Our knowledge of hormones, vitamins, antibiotics and chemotherapeutic agents is so recent as to be associated in time with our own generation. Yet, their applications to treatment are also still largely empirical rather than specific. If, in addition to psychotherapy and pharmacotherapy, we consider the other 2 major categories of treatment—namely, surgery and so-called milieu therapy—I think we are compelled in all humility to admit that all suffer the same critical gaps between theory and practice. Moreover, these 4 modes of therapy are so interdependent and intertwined it can be justifiably declared that the professed application of any one of them to a patient, of necessity, involves one or more of the others regardless of the conscious awareness of the therapist and of his expressed intentions. Consequently, the limitations of any one mode of therapy become burdens to be shared by the others. The patients to be described later clearly demonstrate this. I believe such propositions are true regardless of whether one's outlook is narrowly biological or narrowly behavioral.

¹ Read at the 113th annual meeting of The American Psychiatric Association, Chicago, Ill., May 13-17, 1957.

² Professor of Psychiatry, University of Colorado School of Medicine and Chief, Division of Psychosomatic Medicine, Colorado General Hospital. Address: 4200 East Ninth Avenue, Denver 20, Colorado.

that operationally directed the research in these non-psychoanalytic areas(1).

Another and exceedingly valuable procedure would be based on the development of alternative explanations derived from non-psychological disciplines such as general physiology, biophysics and communication theory. To be specific, the psychoanalytic construct or theory of "the unconscious" makes it possible to classify meaningfully a vast quantity of human psychological data. The validity of this procedure, however, would be immensely strengthened if an alternative theory based upon organic biological mechanisms could be formulated so that there would be no contradiction. The fact that compatibility between different disciplines can be established makes it possible to economize both in the quantity of data to be obtained in any one discipline and in the number of hypotheses required. In accordance with this latter concept I shall discuss both the psychological and the physiological data derived from the observation of therapy—first, to demonstrate the compatibility of explanations in both areas and, second, to achieve an essential economy of explanation.

I have often compared the analysis of a treatment procedure to the analysis of a crude alkaloid whose administration has proven to be empirically effective. Just as we seek to isolate the various active ingredients in our crude drugs with the goals of purifying or synthesizing them, so do we desire to identify the essential factors in the total therapeutic procedure, in order that we may establish their reproducible properties and limitation.

The nature of that therapeutic and possibly metaphysical ingredient known as the art of medicine has always challenged me. Over 10 years ago, I found it possible to report a tentative synthesis of empirical observations and speculation(2), much of which is incorporated here. Prior to this, Lawrence Kubie and I had acquired certain background experiences in several investigations on the role of drugs in states of dissociation and in the therapeutic process(3). We included studies of the phenomena of suggestion and of the nature of the hypnotic process(4). In brief, from our observations and experiments we were able to crystallize the prin-

ciple that within certain limits physiological, pharmacological and biochemical predictability in the human being was variably influenced by psychological factors such as transference, affects and perceptual processes.

My more specifically directed studies began with observations on physicians who were treating hospitalized patients with chronic relapsing and remitting diseases(5). As you know, this group of illnesses has come almost traditionally to be known as psychosomatic. With the growing popularity of Selye's terminology of stress concepts they are also often designated as diseases of adaptation(6).

It became apparent that the capacity to display the art of medicine was a characterological asset in the personality of a given physician. It consisted of great tolerance for the characteristic irrational and regressed behavior of sick people; an intuitive skill in the timing of speech and action leading to the enhancement of the dependency and cooperation of patients; and an ability to carry with grace the role of omnipotence and omniscience imposed upon them by their patients(5).

It is notable that many of the great physicians of the past have described their methods of treatment. Their successes were often ascribed to drugs and procedures which today are regarded as ineffectual and, hence, are not used. For the past century (regarded by some as the era of scientific medicine) many doctors appreciated their patients' emotional factors and in their published clinical studies never failed to list them in the terminology of their time. The papers of Addison, Bright, Hodgkins and Gull are brilliant expositions of this kind(7).

There were a few physicians who wrote on the psychological management of organic disease. Outstanding among these was Weir Mitchell(8). He was the most specific in his recommendations and in the description of the details of his method of treatment. He was dedicated to the influencing of "fat and blood," by which he meant malnutrition and anemia. His patients were put to bed, given continuous care in the form of constant attention to food, rest, sleep and environment. It was apparent that his extraordinary au-

thoritarian behavior was generally interpreted as the highest form of benevolent omnipotence.

The recurring relapses and remissions, and the fluctuations within each of the phases of these sicknesses in effect provided us with multiple experiments in nature on a given individual (9, 10).

At this point I should like to state declaratively those principles of therapy which the rest of this paper will illustrate and elaborate. These are:

1. Affects, moods or emotions are psychophysiological states which tend to augment or decrease psychophysiological states.

2. The interaction of physiologic doses of pharmacological agents with certain affects may be synergistic or antagonistic.

3. A patient reacts to his disease, to his treatment and to his physician with manifest psychological, cultural and, for want of a better term, psychophysiological regression. Where the regression is not manifest there are obvious pathological efforts of the patient to obscure it.

4. By means of iatrogenically induced regression it is possible to alter existing affects or mood states and to bring about new ones.

5. The bodily functions which are psychophysiologicaly excited or inhibited by the regression or the defenses against it either increase or oppose the pathophysiology of the disease.

The methods of observing the characteristics and properties of patient reactions and of patient-physician interaction consisted essentially of deliberate modifications of the timing, duration, and intensity of the factors in the treatment situation. Over a period of time these experimental steps and maneuvers formed into a plan of comprehensive management which was designated as "anaclitic therapy" (5). The term "anaclitic" is borrowed from Freud who used it in two senses: first, to designate the dependency of infantile instinctual needs upon certain ego functions and, second, to identify some special qualities in the infant's relationship with its mother (11). With usage the term has been enlarged in its meaning so that it now also applies to the general period of early infant life when anaclitic relationships are first established. For example, the term "anaclitic depression" used by René Spitz refers to a special kind of infant depression characterized by varying degrees of apathy to bodily and interpersonal needs and to their gratification (12).

We chose to use the term "anaclitic"; first,

because of its historical connection with Freud; second, because of its meaning; and, third, because it emphasizes the psychoanalytic frame of reference in terms of which our investigation was formulated and our empirical observations were systematized.

I have described anaclitic therapy elsewhere (5) as

... a common sense approach consisting of kindness, tolerance, indulgence, allaying of anxiety by any available trial and error means, demonstrative friendliness and reassurance, deliberate omniscient and omnipotent behavior of the doctor for the purpose of enhancing confidence in him, total somatic care in terms of nutrition, medication, hygiene and agreeable environment. The deliberate induction of insight into the unconscious mental processes of the patient is not attempted.

The therapist assumes a role of total permissiveness and all discipline or compulsory formalities are dispensed with to the greatest possible extent. Instead of formal, scheduled daily visits the therapist seeks out the patient wherever he is several times a day. The guiding principle of this frequency is analogous to that of the "demand feeding" schedule of infants. Physiological needs of hunger, thirst, the excretory functions, fondling, rest, sleep, and play are anticipated and indulged. Food may be prepared and served by the therapist, usually in the form of high caloric milk mixtures. It is available on demand and often is given to the patient by his therapist. The patient is touched and handled, areas of pain and discomfort are massaged and stroked. The therapist is actively comforting and reassuring with an attitude of omniscience and omnipotence. He is available to the patient at all times. The activities of nurses, attendants, family—in fact, all personnel—and the administration of somatically directed therapy are represented as being under the direct control and supervision of the therapist.

To summarize in psychological terms the principles upon which anaclitic therapy is based, we can say first, that the pleasure principle is emphasized rather than what might be called the reality principle. Second, maximum expression of affects is encouraged and accepted as indications for adaptive and corrective responses on the part of the therapist. The latter seeks to decrease this psychophysiological behavior not by suppressive exhortation, but by dealing with the need associated with the affect. Thus, the patient is maintained in that state of psychophysiological equilibrium which follows the continuous gratification of needs. Third, every effort is made to allay anxiety and its somatic equivalent, pain. Fourth, these physical and emotional gratifications are offered continuously

without any indications that they were requested or required by the patient, and despite his ambivalence, phobic reactions, anxiety, hostility, and guilt. As our experience grew we realized that this latter principle could not be stressed strongly enough. We learned that communication between the patient and the therapist in the anaclitic relationship, as with the mother and her infant, is essentially non-verbal and consists for the most part of responses to cues, signs, signals, and symbolic manifestations. The verbalization that does occur is generally limited to basic or elemental bodily or emotional needs such as food, fluids, physical discomfort, and the presence or absence of the therapist or of his activities. There were many indications that even when the profoundly regressed patient's language was less concretistic, the symbols used tended to be heavily associated with self references of a need-gratification nature.

This experimental magnification of several aspects of the therapeutic intentions and activities appeared to induce correspondingly magnified reactions in our patients. Two of the responses arrested our attention as possible active ingredients in the therapeutic interaction between patient and physician. One was the process and state of regression. The other was affect, viewed as a psychophysiological state.

With regard to regression, the continuous active gratification of the patient's latent or suppressed wishes, regardless of what he manifestly seems to demand, reinforces the patient's tendency to endow the physician with the attributes of omniscience and omnipotence. Questioning a patient as to his desires instantly puts a limit to his regression and determines his prevailing affect. A decision is demanded and the patient is obliged to modify his wishes in accordance with his capacity and desire for reality testing. Thus, the patient's fantasy of the therapist's omniscience is more or less restricted by reality. Moreover, the patient's wishes are obscured by value judgments (expectations of pain or pleasure) of the therapist's attitudes in order to avoid unpleasurable affects such as guilt and anxiety. In short, the patient is obliged to retain his more matured (though not necessarily healthy) ego functions rather than regress to infantile ego activities.

The sick patient can be regarded as seeking to delegate certain perceptual, integrative and executive functions of his own personality, i.e., ego, to that of the physician. Where this effort is successful the physician becomes psychically represented as an extension or as an instrument of the patient's own being. This state of affairs seems to be one of the essential features of the anaclitic relationship that exists between a mother and her infant. From this point of view, the conclusion is justified that a state of psychological and social regression has been iatrogenically induced by means of anaclitic therapy.

Associated with this iatrogenic regression is the fact that when an individual falls ill, he tends to regress for other reasons as well. For example, he becomes dependent upon his environment for help and for the external maintenance of those capacities which are decreased by his illness. This regressive reaction to disease is adaptive in that it permits an attitude of dependency which in turn favors constructive external help. A third source of regression also of varying degree may be inherent in the character structure of the particular patient. That is to say, he may have latent or clinically overt psychopathology. Hence, the resultant pattern of regression is derived from the 3 sources—the inherent personality of the patient, the adaptive reaction to disease, and the response to anaclitic therapy. This compound regression may be manifested in many ways. The most marked forms observed by us consisted of urinary and fecal incontinence, infantile preferences for food including feeding from a bottle, infantile sleep patterns, infantile patterns of motility (such as lack of normal associated movements) and modes of communication (see above), along with reenactment of infantile attitudes toward parental figures(13). The observation and interpretation by Felix Deutsch, of the postures, gestures and motility of patients in psychoanalysis reveal remarkable degrees of psychomotor regression(14). In short, psychologically, socially, and physiologically regressed traits appear.

When psychological or social manifestations are identified as regressed, the intention is to refer to past behavior which appeared in the course of personality development and which was subsequently replaced by other

forms of behavior more associated with maturity. Statements such as this are generally acknowledged as acceptable, usually without controversy. Yet, a more rigorous examination of the concept of regression, especially in dynamic terms, must at once reveal that the regression is never total and that in any given case only certain elements of behavior, speech, and thought appear to have participated in the regression. Consequently, for the perception and comprehension of regression, a theory of personality and of personality development is essential. Although it is possible to describe regression in phenomenological terms, gross errors are liable to appear. For example, it can be argued that the unqualified designation of schizophrenia as a "psychiatric regression disease" is open to criticism. If schizophrenia is also to be regarded as a state of pathological recovery or restitution from some form of psychological disorganization, it is apparent that this highly inflexible, rigidly differentiated behavioral disease should not be termed "regressed." Moreover, it is rare in my experience that so-called regressed schizophrenic behavior can actually be identified with the earlier allegedly non-psychotic behavior of a given patient.

In psychoanalytic psychology, among several patterns of regression that can be identified, 2 are noteworthy: 1. regression to an early life situation with compulsory repetition of some of its traumatic aspects in the present; 2. regression to a developmental state which antedated the traumatic situation and where equilibrium once existed. When the ego of a patient with organic disease such as coronary occlusion wards off the adaptive regression dependency upon his environment, his prognosis is poor. Such behavior can be regarded as a pathological defense against trauma and represents the return in the present of prematurely imposed and usually unsuccessful infantile methods of coping with stressful situations. Such genetic factors contribute to the formation of maladaptive obsessive-compulsive character traits. It is characteristic of such ego responses that they are disproportionate and often inappropriate. The repetitive stereotyped nature of the obsessive-compulsive symptom illustrates this very well.

It is the concept of physiological regression, however, that appears to arouse considerable opposition and resistance. Criticism that is biologically oriented can be valid according to the criteria which are selected for the identification of regression. For example, if the biological law that "ontogeny recapitulates phylogeny" were to be applied then certainly one might deny the existence of regression in the limb bud that develops in the amphibian after the limb is amputated. After all, in this case, a blastula or gastrula does not become one of the stages of regression. Similarly, although it is admitted that the cells which appear as part of the inflammatory reaction are regressed, it must be recognized that these cells also are limited in their dedifferentiation or primitivity.

The sense in which physiological regression is used by me applies to the return of certain forms of bodily behavior or functions which once had been given up. The regression is never total and it is obvious that some organ activities do not regress, any more than certain tissues have the potential of dedifferentiation. The organs and functions that take part in this regression are those under combined voluntary and involuntary regulation (13). In a forthcoming publication evidence is cited in support of the conclusion that functions under involuntary control can be reflexly influenced by voluntary activity.

Some examples of bodily behavior which can be considered regressive are: urinary and fecal incontinence; appearance of early patterns of motility such as walking without normal associated movements or a wide based gait like that of the child with incomplete maturation of the pyramidal tracts; inhibition of acquired skilled functions which take on the appearance of agnosias or apraxias; infantile sleep patterns; fluctuations of heart rate, respiration, and blood pressure. All physiological functions which participate in the expression or experience of affects are capable of psychophysiological regression.

These forms of physiological regression are most relevant to a concept of etiology and pathogenesis in psychosomatic disease. It is apparent that such fluctuations can exceed the decreasing tolerance of tissues, espe-

cially aging ones, thus resulting in damage to such tissues. An obvious example is concerned with the patient in borderline cardiac decompensation in whom the physiological fluctuations of the affect of anxiety will bring about heart failure simply because the fluctuations of heart action exceed the diminished tolerance of that organ.

The example of the patient with limited cardiac reserve is a very good case for other reasons as well. It is generally correct to say that the less often a tissue or an organ suffers decompensation, the better its capacity for spontaneous recovery and the wider its homeostatic boundaries. Therefore, the psychophysiological equilibrium inherent in the thesis of the therapeutic influence of affects and of regression permits maximum tissue recovery. Conversely, the more the ego persists in disease—that is to say, disavows regression—the less liable the damaged tissues are to recover. The patient is more reactive to internal and external stimuli and the aroused affects tend to be pathogenic in that wider and persistent physiological fluctuations are induced.

With regard to the role of affects in therapy the continuous stream of gratification of bodily needs, the fantasies of omniscience and omnipotence that are part of the compounded regression, the withdrawal from the pressures of the conflict situation associated with the onset of the disease—all contribute to the elevation of mood. To put it very simply, if one gets all that the heart desires without guilt, shame, or anxiety, happiness is the result.

CLINICAL EXAMPLES

I should like now to describe briefly 3 patients with severe relapsing and recurring diseases in order to illustrate these principles.

The first patient is a 19-year-old boy who developed ulcerative colitis shortly after leaving home to attend a university in another city. His disease was of relatively slow onset, but within 6 months he was suffering from bloody diarrhea, abdominal pain, low grade irregular fever, weakness, anorexia, and loss of weight. The infirmary at the university performed appropriate x-ray studies and sigmoidoscopy. It was noted that the boy was depressed and the depression was attributed to his painful, debilitating disease. He was not hospitalized. Instead, a careful supportive regimen was worked out

for him which, however, did not interrupt the slow, progressive course. Some time later he was given cortisone in doses up to 150 mgms. daily. According to his physicians he appeared to fall into that group of patients with ulcerative colitis who do not benefit from cortisone. Although there were no further notes about the patient's mood, reconstruction of the history during this period indicates that his depression was continuous throughout.

His physician believed ulcerative colitis to be one of the so-called psychosomatic diseases and recommended psychiatric consultation. An essential finding at this examination was that the boy was depressed and self-depreciatory because of his disease and of his poor performance generally.

Because of the unremitting course of his illness and his lack of response to steroid therapy, he was included in our group of patients. Within 7 days his mood became elevated and there was an associated decrease in his diarrhea.⁴ After about 3 weeks of progressive improvement during which the bloody diarrhea disappeared, and there was a return of the various clinical signs in the direction of health, a change occurred which compelled me temporarily to be less available to him. He became depressed and his colitis relapsed. When I was able to resume the previous treatment relationship the patient went into remission again. This time, however, cortisone up to 75 mgms. daily was started in preparation for my withdrawal. Following my separation from him the cortisone proved to be pharmacologically effective. Its cessation, however, was succeeded by the appearance of depressive trends and the beginning of a relapse of colitis. The prompt return to cortisone reversed this and the patient's remission was maintained.

Of considerable interest, however, is the observation noted in many patients that during the period of remission associated with the administration of cortisone, the patient was much less accessible to psychotherapeutic influence than when in a remission induced by the relationship with the physician and without the use of cortisone.⁵

The circumstances associated with the relapses and remissions in this patient illustrate

⁴ I might add, incidentally, that my policy is to place such patients on a completely free diet which, not infrequently, turns out to consist of foods previously regarded as "poisonous" by the patient and the people who helped take care of him. This sudden preference for apparently indigestible, highly seasoned and previously forbidden foods is partly a test of the doctor's so-called sincerity. Secondly, it helps the patient to minimize the severity of his disease. That is to say, if he can eat these foods, he is not as ill as he believed himself to be.

⁵ Because the so-called tranquilizers similarly alter responsiveness to psychotherapeutic influence, it would seem worthwhile to investigate this association.

some of the psychological factors which influence the therapeutic response to cortisone.

The next patient is a 9-year-old girl with a 3 year history of ulcerative colitis and with a progressive downhill course despite several remissions. As a rule these remissions would occur when the child had been hospitalized and separated from her family and environment. Finally, when a prolonged period of hospitalization did not result in remission and her condition became so poor that it was no longer safe to perform surgery upon her, she was transferred to our hospital for anacritic therapy.

The child was almost moribund, profoundly anemic with severe hypoproteinemia, ascites, and running a high spiking fever. The intense supportive medical treatment which she had been receiving prior to admission was continued. In the course of anacritic therapy, she regressed to bottle feeding, fecal and urinary incontinence, and the wearing of diapers. In this state of psychological, physiological, and social regression she entered into a remission preceded by elevated mood changes.

Her course in the hospital consisted of minor relapses and remissions with the general trend in the direction of remission. The investigation of these fluctuations furnished repeated opportunities for the analysis of the relationship of the affective state of the patient to the pathophysiology of her disease. In brief, the psychophysiology of depression augmented the pathophysiology of her colitis, whereas that of elevated moods decreased it (9, 10).

Because her colon had developed marked polypoid changes, it was feared that anaplastic carcinomatous degeneration would occur. Colostomy and permanent ileostomy were advised. Her physical condition and psychological preparation were such that she withstood the surgery very well.

The third patient is a young woman now in her early twenties with a history of asthma. After an initial period of anacritically oriented therapy she entered into psychoanalysis. She had been known to be asthmatic since the age of 7 but her history suggests that she was probably asthmatic at the age of 4. Although at times she would be relatively well, she was regarded by her family, her physicians and also by herself as being hardly ever without asthma or at least living always in the shadow of a severe attack. Climatic changes, desensitization procedures and medication were without remarkable effects.

Following its availability, cortisone was enthusiastically administered by a physician whom she especially liked. For the first time she obtained significant relief from her asthma. However, she appeared to be unduly prone to the development of a Cushing's syndrome reaction. The appearance of a hirsute, skin blemishes, a beginning moon face, and other bodily alterations were reacted to with horror by the patient and especially by her mother. The abrupt cessation of cortisone was followed by a return of the asthma and the disappearance of the hyperadrenal state. From that point on the use of

cortisone failed to influence her asthma—even when pushed to the point of hyperadrenalism.

She was referred for anacritic therapy to which she reacted very well as far as her asthma was concerned. The characterological changes associated with her regression and following the remission of the asthma were those of an aggressive, impulsive, destructive youngster. She was particularly sadistic and savage with her mother, using cruel and vindictive language on the slightest provocation and frequently assaulting her mother physically. She constantly reproached and represented her mother as negligent, indifferent and as the cause of her suffering and discomfort. She developed an immense intolerance for frustration and generally demanded and sought immediate gratification of any need or impulse. Despite the fact that her family had been prepared for the emergence of regressed behavior, they soon began to wonder and to hint that possibly the asthma might be preferable to this painful personality disorder.

In the course of treatment the aggressive, sadistic behavior changed into a very severe phobic reaction characterized by overwhelming panic when she was left alone, particularly when separated from her mother. She became obsessed with feelings of ominous foreboding and of danger to her mother and by an insistence on having her mother account for every activity and for every minute of her time.

As this phobic mechanism became the focus of psychotherapeutic attention the patient's asthma began to recur in brief episodes, but never with the intensity and duration that occurred prior to psychotherapy. At this time cortisone in daily doses of 50 to 75 mgms. or prednisone up to 15 mgms. controlled the attacks and it was rarely necessary to continue medication for more than a few days. With the disappearance of the phobia, the patient had minimal asthma and was no longer dependent on medication. In addition, she had lost her aggressive character disorder.

The vicissitudes of this patient's illness and her responses to treatment demonstrate several important issues. First of all, her ability to respond favorably to steroid therapy depended, it would appear, upon her psychophysiological or affective state. Second, when possessed by phobic anxieties or in a characterologically regressed state, her asthma was not clinically disturbing. Third, like a few other patients whose anacritic phase of therapy was followed by psychoanalysis, it was possible to reconstruct much of what had transpired during the phase of regression.

The relationship between steroids and affects—at least in this patient—was such that the amount of steroid necessary to oppose an antagonistic affect pushed her into hy-

peradrenalism before her asthma could be favorably influenced. On the other hand, however, affects which opposed the pathophysiology of her asthma decreased the steroid intake to a minimum or nothing at all.

With anaclitic therapy the asthma was replaced by the aggressive character disorder characterized by angry explosive tearfulness over frustration and by impulsive acting out. When this was psychotherapeutically controlled, it was succeeded by a typical phobic reaction which was manifested by almost continuous tearful anxiety and the labile psychophysiological phenomena of that affect. She was in this state when psychoanalysis was begun.

CONCLUSION

I should like to conclude by a restatement of the principles of therapy submitted for your consideration and which have been illustrated by several clinical examples.

1. Affects, moods or emotions are psychophysiological states which tend to augment or decrease pathophysiological states.

2. The interaction of pharmacological agents with certain affects or emotions may be synergistic or antagonistic.

3. A patient reacts to his disease, to his treatment, and to his physician with manifest psychological, cultural, and—for want of a better term—physiological regression. Where the regression is not manifest there are obvious pathological efforts of the patient to obscure it.

4. By means of iatrogenically induced regression it is possible to bring about new affects or mood states.

5. The bodily functions which are psychophysiologicaly excited or inhibited by the regression or the defenses against it either increase or oppose the pathophysiology of the disease.

BIBLIOGRAPHY

1. Margolin, S. G.: *Psychoanal. Quart.*, 20: 349, 1951.
2. Margolin, S. G.: *Group for the Advancement of Psychiatry, Circular Letter*, 114: 7, 1948.
3. Kubie, L. S., and Margolin, S. G.: *Psychosom. Med.*, 7: 147, 1945.
4. Kubie, L. S., and Margolin, S. G.: *Am. J. Psychiat.*, 100: 611, 1944.

5. Margolin, S. G.: *Psychotherapeutic Principles in Psychosomatic Practice. In Recent Developments in Psychosomatic Medicine*, Wittkower, E., and Cleghorn, R., eds. Philadelphia: J. B. Lippincott Co., 1954.

6. Margolin, S. G.: *El Tratamiento Psicomatico De Las Enfermedades De Adaptacion*. Read at 2nd Ibero American Medical Psychological Congress in Buenos Aires, Argentina, August 23, 1956. To be published in the Proceedings of the Congress.

7. Margolin, S. G.: *Psychosom. Med.* 15: 563, 1953.

8. Mitchell, S. Weir: *Fat and Blood*, 5th Ed. Philadelphia: J. B. Lippincott Co., 1888.

9. Stewart, A. H., and Margolin, S. G.: *On Regression in Anaclitic Therapy*. Read at Meeting of the American Psychiatric Association in Chicago, Ill., April 28, 1956. To be published.

10. Schapire, H., and Streamer, C. W.: *On the Confirmation of Hypotheses in Anaclitic Therapy*. Read at Meeting of the American Psychiatric Association in Chicago, Ill., April 28, 1956. To be published.

11. Freud, S.: *On Narcissism: An Introduction*. In *Collected Papers*, Vol. IV. London: Hogarth Press, 1934.

12. Spitz, R.: *Anaclitic Depression*. In *The Psychoanalytic Study of the Child*, Vol. II. New York: International Universities Press, 1946.

13. Margolin, S. G.: *Genetic and Dynamic Psychophysiological Determinants of Pathophysiological Processes*. In *The Psychosomatic Concept in Psychoanalysis*, Deutsch, F., ed. New York: International Universities Press, 1953.

14. Deutsch, F.: *Psychoanal. Quart.*, 21: 196, 1952.

DISCUSSION

GEORGE L. ENGEL, M. D. (Rochester, N. Y.)—Working with similar patients, Margolin and I have both conceptualized the physician's role as that of a "surrogate ego" for the patient. Beyond this, however, our views differ. For example, I feel that playing an omniscient and omnipotent role is unnecessary. If the doctor has a sound understanding of the disease process and proceeds with assurance and confidence, he can safely leave to the patient the projection of these qualities. Nor is it necessary to assume a role of total permissiveness or to participate in body care to the degree that Margolin suggests.

In contrast to Margolin, we suggest that the process whereby the doctor-patient relationship is established and the surrogate ego role assumed is not regressive (iatrogenically induced), but restitutive. Actually, not only does the illness itself involve a regression, but also it usually is already preceded by a regression. Our investigations have revealed separation and depression to precede the development of organic pathology in a high proportion of cases. Arthur Schmale, of our group, has formu-

lated these processes as follows: "*Separation* represents the loss, or threat of loss of any object of gratification, real or symbolic, internal or external, conscious or unconscious. This object must have an intrapsychic representation based on past relationships with this object or other symbolically similar objects. *Depression* refers to the psychological manifestations of the threat of loss for the psychic self which results from the ego's inability to resolve the real or fantasied loss."

Thus, at the point of the physician's intervention, the patient is suffering from a psychic object loss, with corresponding ego defect. This in itself involves regression and if the physician succeeds in establishing a relationship, this constitutes a step in the compensation for the loss and the reconstitution of ego.

The level at which this is accomplished is determined by past development and the nature of the transference, among other factors, and not by special roles assumed by the doctor. Some patients are able to establish and maintain the relationship with the physician only at a very infantile level; others quickly establish a relationship and thereafter function successfully at progressively more mature levels. I believe the extreme regressive behavior that Margolin evokes in his patients is not a necessary part of the therapeutic process and in some instances may be harmful.

We also disagree with Margolin's concept of affects. Affects have instinctual and discharge aspects and ego and signal aspects. They have psychic representations, as unconscious fantasies, as well as conscious verbal or symbolic expressions. And they have somatic concomitants in terms of the body's participation in both instinctual and defensive processes. Some affect is present at all times, not only at the signal level of "How am I doing?" but probably also at the somatic level. Affects themselves have no primary pathogenic significance. They indicate the state of affairs at the moment. Their expression may lead accidentally to structural damage as when, during rage, heart failure develops in a patient with pre-existing heart disease or a man breaks his hand hitting someone. But, both from signal and discharge aspects, any affect may as well have beneficial as harmful consequences.

Affects indicate the state of the psychic object and psychic self and also reflect the success or failure of ego function. The affects which most frequently immediately precede the development of somatic disorders are helplessness or hopelessness, defined by Sigmund in object relationship terms as follows: "Helplessness is a feeling of being discouraged, let down, or left out, consciously or unconsciously perceived as coming from an object, leading to an object-directed desire to be taken care of and protected. The patient feels unable actively to initiate or pursue the desire to bring the object closer. Hopelessness is a feeling of despair, there is nothing left, perceived as coming from the self and results in a self-directed desire to do absolutely

nothing. Even when the object comes closer or indicates an interest in a closer relationship, the patient feels incapable of responding. Helplessness and hopelessness indicate the ineffectiveness of the ego processes to maintain the patient's psychic self in relationship with an object." They are not pathogenic affects. That they so frequently precede the development of organic disease suggests that with psychic object loss and the resulting ego defect, some integrating influence on bodily systems may be lost. When the loss is compensated for through the doctor-patient relationship, ego is reconstituted and with it, we presume, higher control over organic processes is rechieved. This, rather than induced regression, accounts for the favorable effects of anaclitic therapy.

NORMAN Q. BRILL, M. D. (Los Angeles, Calif.)—Dr. Margolin's observation that the action of a drug is influenced by an individual's emotion state is consistent with clinical experience. This has been particularly observed in schizophrenic patients where altered reactions are seen with a variety of pharmacologic agents.

However, there are some points about his other principles which might better be called hypotheses which I should like to comment upon: from one point of view affects may be looked upon as psychophysiological states which in turn have an effect on pathophysiological states. From another point of view this may represent an oversimplification. The fact that emotional changes occur when needs are gratified (as in anaclitic therapy) would suggest that affect is an emotional tone that accompanies, or is part of, a psychophysiological state—rather than the state itself. The distinction is made not to quibble. It has importance if it is implied that mood or affect in itself influences pathophysiological states rather than factors such as gratification and elimination of conflict. It carries the danger of looking too much for pharmacologic agents that alter mood as cures for conflict and the emotional disorders they cause. One might wonder if it is the regression (that is produced by anaclitic treatment) that is the factor which alters a patient's mood or whether it is the catering to the patient's dependent needs.

Again, do the somatic changes which accompany emotional regression result from the regression *per se*, or from the alteration in the intrapsychic tension that it produces which is ultimately reflected in changes in the degree of pathophysiology. It would matter considerably if the regression were successful as a compromise solution and if the expectations of the regressed state were or were not fulfilled. The concept of correspondence of psychic and physiological regression is an intriguing one, but as yet, not adequately substantiated as a universal phenomenon.

I don't know that I can subscribe to the concept that efforts to avoid psychophysiological regression in illness are necessarily pathological. The implication is that any resistance to regression and defense against impulses is bad. This may be so if

one is attempting to treat a patient by making him regress. It is possible to help patients become aware of their neurotic needs and feelings, and their repressed impulses and to understand their origins and meanings without having them acted out and gratified. Gratifying a patient's neurotic needs through the device of role playing on the part of the therapist might contribute to an increased difficulty in later analyzing and understanding their origins and meanings, and limit the degree to which

psychosexual maturity could be achieved. I wonder if in using anaclitic therapy, Dr. Margolin has ever encountered patients whose needs were insatiable in the regressed state and who therefore could not be brought to a stage of relative psychic and physiologic equilibrium and also if efforts to induce profound regression are successfully resisted by some patients who are aware of the gross irrationality of their needs and who demean the therapist who encourages it.

PROGNOSIS IN ADOLESCENT DISORDERS¹

JAMES F. MASTERSON, JR., M.D.²

INTRODUCTION

This is a second paper reporting the results of a study of prognosis in 153 adolescent patients hospitalized at the Payne Whitney Clinic. A previous publication(4) presented a review of the literature, the methodology, the general results, and a discussion of the prognostic factors in schizophrenia. To review the method in brief: detailed information from as many contacts as possible was obtained on 153 patients ages 12 to 18 inclusive who were admitted to the Payne Whitney Psychiatric Clinic from March 1, 1936, to March 1, 1950. This provided a minimum of 5 and a maximum of 19 years follow-up. The patients' charts were reviewed and the patients were classified according to diagnosis and then into 4 adjustment groups based on their level of functioning at the time contacted. The adjustment groups varied from A—functioning without symptoms, to D—incapacitation requiring hospitalization. The patients in each adjustment group were then studied to determine the relationship between 20 clinical prognostic factors, and actual later adjustment. Each clinical factor used for prognosis was specifically defined along the lines of the examples shown below:

Length of Onset: The time of onset of an illness is at best an arbitrary matter and depends to a large extent on the observation of unskilled observers. It is used here as the lapse of time between the first evidence of difficulty, and either admission or inability to function because of symptoms, whichever occurred first.

"Neuropathic" Traits: These were taken as evidence of some disturbance early in life. It was not possible to assess their intensity or duration which would have made this factor more meaningful. Included were temper tantrums, feeding problem, breath-holding, enuresis, night terrors, tics, nail biting.

¹ Read at the 113th annual meeting of The American Psychiatric Association, Chicago, Ill., May 13-17, 1957.

² From the Department of Psychiatry, Cornell University Medical College and The New York Hospital (Payne Whitney Psychiatric Clinic).

School History: School adjustment was considered good if the patient was able to pass all grades until history of present illness. If he failed one or more subjects it was considered poor.

P/Rs.: Psychotherapy was defined as the patient's ability to cooperate with his therapist in discussing his emotions. For example, if the patient was able to discuss his conscious emotional attitudes to situations or people, he was considered to be participating in psychotherapy.

This paper will present the results found in all diagnostic categories.

RESULTS

The results for the 153 patients are shown in Table I according to diagnosis.

OUTCOME

Schizophrenia: These findings have been detailed in a previous publication (4). To summarize them briefly, 67% had a marked impairment of functioning 10 years later, or well beyond the chronological age of adolescence. Seventy-five percent required more than 3 years of additional hospitalization. Only 15% managed to adjust without re-entering a hospital.

Psychoneurosis: The majority of the patients in the "A" group continued their lives without symptoms or treatment. Eleven of the women are married with children, active housewives without symptoms. Three women are married without children; 5 are single and working. Of the 3 men, 2 are married, 1 engaged, and all 3 are self-supporting and without symptoms. In the "B"

TABLE I

DISTRIBUTION OF DIAGNOSTIC GROUPS IN TERMS OF FOLLOW-UP ADJUSTMENT

Diagnosis	Adjustment groups				Total
	A	B	C	D	
Schizophrenic reactions..	15	12	22	34	83
Psychoneurosis	22	10	0	2	34
Psychopathic personality.	7	4	4	5	20
Affective disorders	4	3	0	1	8
Organic reactions	2	0	1	5	8
Total	50	29	27	47	153

Dated ...

1097

group it was more common to have recurrence of symptoms and further treatment. One required additional hospitalization; 4 are married with children; and 2 are single and working. One of the patients in the "D" group suffered from a depression with hysterical features whose symptoms continued for 8 years until she committed suicide at 22. The other is an obsessive-compulsive whose symptoms have completely incapacitated him since he left the hospital in 1945.

Psychopathic Personality: In the "A" group the 4 women are all married with 2 or 3 children and the men are finishing school or working. They all showed occasional difficulty for several years after hospitalization, but when they reached their twenties, this subsided. In the "B" group one man is an overt homosexual, but otherwise adjusts well. A woman finished school and does art work. Two men are married, with several children, and have changed jobs fairly frequently. All these patients seemed aware of problems with impulsiveness and procrastination, but made efforts to control it. In the "C" group all of the patients were single, drifted from job to job without goals. In the "D" group 3 are in state hospitals, 1 killed himself, and 1 is addicted to drugs.

Affective Disorders: In the "A" group, only 1 patient had a recurrent attack with a follow-up averaging 11 years. In the "B" group, 1 did well until killed in World War II. Two had alternating manic and depressive phases with several hospitalizations. The "D" patient is a circular type who has been in and out of hospitals for 7 years.

Organic Reactions and Mental Deficiency: The I.Q. of the mental deficient ranged from 40 to 72. One patient with an I.Q. of 59 (with anxiety, depression) at age 12, has managed in 10 years to graduate from high school, taking courses two or three times on his own impetus, and he now plans college. The other mental deficient has not done well. The two with schizophrenia have remained in state hospitals (along with the behavior disorder patient); the other patient is making a marginal adjustment outside of a hospital. The epileptic is doing very well finishing college. The one with post-traumatic

convulsive disorder, after 11 years, died of pneumonia following a brain operation.

PROGNOSTIC FACTORS

Schizophrenia: In this group it was possible to do a statistical analysis to validate each prognostic factor. The conclusions are presented in Table 2 below.

Psychoneurosis: The uneven distribution in this group made it impossible to do a statistical analysis. However, the data found is presented in Table 3. The following were not included in the table as they were not found to contribute toward prognosis: presence of precipitating factors, abnormal EEG, family history of emotional illness, presence of neuropathic traits, school history, social adjustment.

Psychopathic Personality: This term is admittedly unsatisfactory: it was used to designate those patients who showed anti-

TABLE 2

- a. Factors related to an unfavorable outcome:
 1. Age of 14 or below on admission
 2. Diagnostic sub-group of hebephrenic or simple schizophrenia
 3. Length of hospitalization of more than four months
 4. Length of onset of more than 12 months
 5. History of poor pre-illness social adjustment
 6. History of poor pre-illness school adjustment
 7. Poor prognosis at discharge
 8. Unimproved at discharge
 9. Autism, shallow and inappropriate affect exhibited in the psychopathology
 10. Lack of improvement with somatic therapy or slow improvement
- b. Factors related to a favorable outcome:
 1. Age of 15 or over
 2. Diagnosis of affective features or possible toxic features
 3. History of good pre-illness social adjustment
 4. History of good pre-illness school adjustment
 5. Good prognosis at discharge
 6. Confusion, disorientation, and/or fear exhibited in the psychopathology
 7. Rapid improvement without relapse
- c. Factors not related to outcome:
 1. Sex
 2. Family history of emotional illness
 3. Presence of obvious precipitating factor
 4. Presence of neuropathic traits
 5. Response to psychotherapy

TABLE 3

PSYCHONEUROSIS

	A		B
Number of Patients.....	22		10
Age (Average) in years.....	16		15.6
Sex	19 Female 3 Male		6 Female 4 Male
Length of Hospitalization in Months	5.05		6.2
Diagnosis	Anxiety and depression..... 5 Hysteria: conversion 7 Hysteria: anxiety 4 Obsessive-compulsive 5 Epilepsy and hysteria 1		Obsessive-compulsive 6 Anxiety and depression and hysteria 1 Hysteria and obsession..... 3 Epilepsy 0
Prognosis	Guarded 17 Good 3 Fair 2		Guarded 8 Good 2
Result	Improved 17 Much improved 3 Unimproved 2		Improved 8 Much improved 1 Unimproved 1
Length of Onset in Months.....	Less than 3 mos..... 7 3-6 mos. 5 6-9 mos. 2 More than 12 mos..... 8		Less than 3 mos..... 1 3-6 mos. 2 6-9 mos. 3 More than 12 mos..... 4
Course in Hospital.....	Symptoms cleared less than 6 weeks 9 Symptoms cleared more than 6 weeks 8 Symptoms stayed same..... 3 Symptoms cleared and re- turned 2		Symptoms cleared less than 6 weeks 0 Symptoms cleared more than 6 weeks 4 Symptoms stayed same..... 1 Symptoms cleared and re- turned slowly 5
Response to Psychotherapy.....	Responded 8 Did not respond..... 14		Responded 5 Did not respond..... 5

social symptoms or whose pathology was primarily acting out impulses. The findings for each prognostic factor were analyzed with a rank T test (1) to determine the level of statistical significance. This test determines how often the findings can be expected to occur by chance. The results are expressed as a probability, *i.e.*, $P=.10$ means it might occur ten times in a 100 by chance, and $P=.90$, means that it might occur 90 times in a 100 by chance.

The prognostic factors analyzed with the rank T test but not found to have a statistically significant relation to outcome were as follows: age division at 14 and 15, sex, length of onset (less than 1 year as against more than 1 year), presence of precipitating factor, family history of emotional illness, social adjustment, prognosis on discharge (*i.e.*, good or poor, guarded or unguarded),

result on discharge, symptoms cleared in more than 6 weeks, symptoms cleared and returned.

Table 4 presents the findings in those factors that were related to outcome.

As can be seen in Table 4, the age becomes significant when the division is made at 16 and below. There is a larger proportion of patients in the "A" group than in the "D" group with an age of 16 and below. Analysis showed that there is a significant difference between an age of 16 and below and 17 and above in terms of later outcome, at the 0.5 to .10 level; thus, the patient with an age of 16 and below has a greater chance of a good later outcome. Analyzing in a similar manner the other factors in Table 4 reveals the following: a patient with abnormal EEG has a greater chance of a good later outcome. A patient with a poor school

TABLE 4

		Adjustment groups				
Age on Admission	A	B	C	D		
17 and above	1	2	2	3		
16 and below	6	2	2	2	$P = > .05 < .10$	
		Adjustment groups				
Abnormal EEG	A	B	C	D		
Positive EEG ...	5	1	1	1		
Negative EEG ..	2	3	3	4	$P = > .05 < .10$	
		Adjustment groups				
School Adjustment	A	B	C	D		
Good	7	4	1	3		
Poor	0	0	3	2	$P = > .05 < .10$	
		Adjustment groups				
Response to Psychotherapy	A	B	C	D		
Good	4	3	1	0		
Poor	3	1	3	5	$P = > .02 < .05$	
		Adjustment groups				
Symptoms (1)	A	B	C	D		
Symptoms cleared less than six weeks	6	1	0	0		
vs.						
All others	1	3	4	5	$P = .01$	
		Adjustment groups				
Symptoms (2)	A	B	C	D		
Symptoms stayed same	1	1	3	3		
vs.						
All others	6	3	1	2	$P = > .05 < .10$	
		Adjustment groups				
Symptoms (3)	A	B	C	D		
No symptoms ...	0	0	0	2		
vs.						
All others	7	4	4	3	$P = > .05 < .10$	

adjustment has a greater chance of a poor outcome. A patient with a poor response to psychotherapy has a greater chance of a poor later outcome. A patient whose symptoms cleared in less than 6 weeks has a better chance of a good later outcome. A patient who shows no symptoms or whose symptoms stay the same has a greater chance of a poor later outcome.

DISCUSSION

1. *Age*: In the schizophrenic group an age of 14 or below was related to a poor outcome; in the psychopathic group an age of 16 or below was related to a good outcome; while in the psychoneurotic group the

younger age did not mitigate against a good outcome. The age of the affective group confirmed the impression that this disorder usually occurs at an older age level.

2. *Length of Onset*: In the schizophrenic group a length of onset of more than 1 year was related to a poor outcome, but in the psychoneurotic and psychopathic personality groups the onset could be of several years duration without its adversely affecting the outcome.

3. *Precipitating Factor: Abnormal Physical Findings: Family History of Emotional Illness*: In all groups the presence of these 3 factors was not found to be related to outcome. This finding is in opposition to the studies of Carter(6) in adolescents and Rennie(5) in adult schizophrenics

4. *"Neuropathic" Traits*: These were found to be prevalent in all diagnostic groups, and not to be related to outcome. The exact significance of "neuropathic" traits has not been evaluated, but they appear to be so prevalent that they do not contribute to an understanding of later outcome.

5. *School Adjustment*: Was most meaningful in the schizophrenic and psychopathic groups where a history of poor school adjustment indicated a poor prognosis. In the psychoneurotic group it was not related to outcome. If the schizophrenic or psychopathic difficulties are severe enough to contribute toward a school difficulty before the outbreak of a circumscribed illness the outcome will be poor. The psychoneurotic, however, as in the adult, usually manages to persevere in school despite his difficulty, and even if he doesn't it does not indicate a poor outcome.

6. *Social Adjustment*: Again was most meaningful in the schizophrenic group where a history of poor pre-illness social adjustment indicated a poor outcome. It was not related to outcome in psychoneurotic and psychopathic personalities.

7. *Psychopathology*: The individual psychopathologic features were most meaningful in the schizophrenic group where the presence of confusion, disorientation and/or an affect of fear were related to a good outcome. Autism, shallow affect and inappropriate affect were related to a poor outcome. In the psychoneurotic there was a suggestion

that obsessive-compulsive features tend toward a poorer outcome, while a diagnosis of hysteria tends toward a good outcome. Otherwise such individual psychopathologic factors as anxiety or depression, did not seem related to outcome. This was also true with the psychopathic personality group where the nature or degree of acting out or the presence or absence of psychoneurotic symptoms were not related to outcome.

8. *EEG*: Presence of abnormal EEG was not found to be related to outcome except in the psychopathic personality group where abnormal findings were related to a good outcome. This is an interesting finding in view of a recent study of a large group of psychopaths(3) that showed that the patients who had the poorest outcome had normal EEG's.

9. *Diagnosis*: The study confirms the impression of the paramount importance of diagnosis in forming a prognosis. If the differentiation between schizophrenia and psychoneurosis can be made, a great deal is already known regarding the possible prognosis. In addition, the relative value of each prognostic factor differed with each diagnostic category.

10. *Length of Hospitalization*: Was found to be most meaningful in the schizophrenic group where a duration of more than 4 months was a sign of poor prognosis. The psychoneurotic stayed longer, but this did not detract from a good prognosis. In the psychopathic personality it was not related to outcome.

11. *Response to Treatment*: A rapid improvement of symptoms without relapse was related to a good outcome in the schizophrenic and psychopathic personality groups. In the schizophrenic group slow improvement, or no improvement with somatic treatment indicated a poor prognosis. In the psychopathic group the absence of social symptoms, or symptoms remaining the same, indicates a poor prognosis. In the psychoneurotic group there did not seem to be a relationship between outcome and response to treatment.

12. *Response to Psychotherapy*: 25% of the schizophrenic patients and 40% of both the psychoneurotic and psychopathic patients responded to psychotherapy. However, there

was no apparent relationship between this response and later outcome except in the psychopathic group where a poor response was related to a poor outcome. Most of these patients were seen 3 times a week in an intensive form of therapy. It is surprising that there was not more of a relationship between psychotherapy and outcome.

13. *Result on Discharge*: The large majority (25/32) of the psychoneurotics, and of the psychopathic personalities (9/20) were improved on discharge, thus, this factor was found meaningful only in the schizophrenic group. If a patient in this group was unimproved on discharge it was a sign of poor prognosis.

14. *Prognosis*: The predominant use of guarded in all categories seems to reflect both the psychiatrist's caution and his uncertainty. The prognosis given at discharge was not found related to outcome except in the schizophrenic group, and there only in the small percentage of cases that the psychiatrist felt warranted designation as good or poor. It would seem that in this area there is a great need for a clarification in the meaning of the terms used for prognosis and for refinement of the prognostic criteria. The uncertainty regarding prognosis seems much greater in adolescent than in adult disorders; however, this may be a result of the paucity of clinical studies on this problem.

15. *Subsequent Course*: There was a marked difference in the subsequent course of all the illnesses. In the schizophrenic group 67% had a marked impairment of functioning 10 years later, or well beyond the chronological age of adolescence. Only 15% managed to adjust without re-entering a hospital, and 75% required more than 3 years of additional hospitalization. In the psychoneurotic group the great majority were able to continue their lives without hospitalization or substantial incapacitation. The psychopathic patients varied considerably from an apparent recovery from symptoms to incapacitation because of symptoms.

CONCLUSIONS

A. *Schizophrenia*:

1. 15/83 patients had a good outcome
- a. Factors related to an unfavorable outcome:
 1. Age of 14 or below on admission

2. Diagnostic sub-group of hebephrenic or simple schizophrenia
 3. Length of hospitalization of more than four months
 4. Length of onset of more than 12 months
 5. History of poor pre-illness social adjustment
 6. History of poor pre-illness school adjustment
 7. Poor prognosis at discharge
 8. Unimproved at discharge
 9. Autism, shallow and inappropriate affect exhibited in the psychopathology
 10. Lack of improvement with somatic therapy or slow improvement
 - b. Factors related to a favorable outcome:
 1. Age of 15 or over
 2. Diagnosis of affective features or possible toxic features
 3. History of good pre-illness social adjustment
 4. History of good pre-illness school adjustment
 5. Good prognosis at discharge
 6. Confusion, disorientation, and/or fear exhibited in the psychopathology
 7. Rapid improvement without relapse
 - c. Factors not related to outcome:
 1. Sex
 2. Family history of emotional illness
 3. Presence of obvious precipitating factor
 4. Presence of neuropathic traits
 5. Response to psychotherapy
- B. Psychoneurosis:**
1. 32/34 patients had a good later outcome.
 2. Following factors found not to be related to outcome:
 - a. Presence of precipitating factors
 - b. Abnormal EEG
 - c. Family history of emotional illness
 - d. Presence of neuropathic traits
 - e. History of pre-illness school and social adjustment
 3. Following did not adversely affect good outcome:
 - a. Younger age
 - b. Length of onset of more than 1 year, even 3 to 6 years
 - c. Type of psychoneurosis
 - d. Response to treatment whether immediate or prolonged
 - e. Response to psychotherapy
- C. Psychopathic Personality:**
1. 11/20 patients had a good later outcome
 2. Factors not related to outcome:
 - a. Age differential at 14 and 15
 - b. Sex
 - c. Length of onset
 - d. Precipitating factor
 - e. Family history
 - f. Social adjustment
 - g. Prognosis

- h. Result
 - i. Rapid improvement
 - j. Rapid improvement with relapse
3. Factors related to outcome:
 - a. Good outcome:
 1. Age of 16 and below
 2. Abnormal EEG
 3. Symptom clear in less than 6 weeks
 - b. Poor outcome:
 1. School adjustment-poor
 2. Response to psychotherapy-poor
 3. No symptoms, symptoms stay same.

SUMMARY

Follow-up information with a span of 5 to 19 years was obtained on 153 adolescent patients between the ages of 12 and 18, hospitalized at the Payne Whitney Psychiatric Clinic.

The patients were divided into 4 outcome groups based on their present level of functioning. The criteria of the groups ranged from symptom free to incapacitation necessitating hospital care.

A comparison was then made between 20 clinical factors used for prognosis and actual later adjustment. In a previous publication the results with the schizophrenic patients were presented. In this paper the results with the psychoneurotic, psychopathic personality, affective, organic groups are presented.

The conclusion presents the prognostic factors as related or not related to outcome.

The discussion compares the relative value of all the prognostic factors studied.

BIBLIOGRAPHY

1. Bross, Irwin: *Fed. Proc.*, 13:815, 1954.
2. Carter, A. B.: *J. Ment. Sci.*, 88:31, 1942.
3. Lieberman, Daniel, and Siegel, Benjamin: *A.J.P.*, 113:9, 807, 1957.
4. Masterson, J. F.: *Jour. Nerv. and Ment. Dis.*, 124:219, 1956.
5. Rennie, T. A. C.: *Arch. Neurol. and Psychiat.*, 46:197, 1941.

DISCUSSION

MARGARET C.-L. GILDEA, M.D. (St. Louis, Mo.).—There are many aspects of this paper that could profitably be discussed, but one of the most provocative findings is the absence of correlation between outcome and response to psychotherapy generally, and especially in the schizophrenic group. This finding contrasts sharply with recently published work by Drs. Whitehorn and Betz reporting on the prognostic importance of the patient's rela-

tionship to psychotherapy. The Phipps group of schizophrenics is not confined to adolescents, but one would expect the same factors to enter in. In the Mastertson study, the category of "response to psychotherapy" must represent a subjective judgment on the part of the treating doctor, and probably is related to a mutual acceptance or rejection between patient and doctor. However one sometimes sees resistant patients recover, and contrariwise (especially in compulsives), patients responding doggedly to psychotherapy and getting nowhere clinically. But I would like to hear further analysis of this factor. The unimpressive showing of psychotherapy stimulates thought in planning treatment programs. I would like to see Dr. Mastertson analyze the improvement rate in his schizophrenics by doctor, to see if he could demonstrate, as Whitehorn and Betz did, that certain individual psychiatrists were able to bring about improvement in a greater proportion of their patients than other psychiatrists could. Perhaps a breakdown of these figures by doctor might confirm the Phipps study and would contribute further to our understanding of the elements acting for success or failure in psychotherapy.

Other factors defined here as correlated with outcome agree with clinical experience. The simple schizophrenic with the long history and early age of onset has the worst outlook. The more acute confusional case does better than the slowly de-

veloping autistic or withdrawn one. The correlation of poor pre-morbid social adjustment with poor outcome confirms much generally held opinion. A recent follow-up study from the Boston Psychopathic, by Greenblatt, York and Brown, shows that loss of social contacts is the first sign of the downhill course, and resumption is one of the last signs of real improvement. Dr. Hastings' follow-up study from Minnesota, reported at this meeting, wisely uses social adjustment as the critical measure of clinical improvement. Thus the special value of group therapy may be inferred, as the method most specifically directed at improvement in social functioning.

I am especially interested in the confirmation found here of the favorable prognostic significance of good school adjustment at least in the schizophrenic and psychopathic groups. Dr. Patricia O'Neal's follow-up study of child guidance clinic cases shows her controls (picked at random from a normally adjusted school population), doing very well 20 years later. Similar findings in St. Louis County and Prince George's County show that school adjustment and achievement, and especially reading achievement, are reliable indices of general adjustment. Repeated findings of this sort should make us redouble our efforts to make the school experience constructive for our children and to keep the school mental health services operating at the highest possible level.

PATIENT "PRIVILEGES" IN MENTAL HOSPITALS¹

A. H. TUMA, PH.D. AND LUCY D. OZARIN, M.D.²

Prior to the 19th century, the mentally ill were regarded as criminals or possessed of evil spirits. With the advent of Moral Treatment, first in Europe and then in the United States, they were seen as unfortunate victims of circumstances who would respond to kindness, respect and humane care by self-imposition of control and discipline. But after the middle of the 19th century, custodial hospital care appeared and dominated the American psychiatric scene for almost 100 years. Only in the past decade or two have we witnessed a rebirth of Moral Treatment by the application of a broad range of humane therapies in the mental hospital—enriched by scientific contributions from the new fields of psychology, sociology and anthropology, as well as by advances in psychiatry. The deterministic orientation which assumes a causal relationship between the attitudes, needs and values of the staff and the capacity of the patient to gain insight and recover from illness is a cardinal feature of the current philosophy of psychiatric care and treatment.

While man's right to dignity, freedom and equality were conceived as social and political issues in the early days of 19th century Moral Treatment, they have come to be regarded today as *psychological necessities* to the well-being of man.

This is a report of a survey designed to identify and describe current practices in public mental hospitals in the U. S. and Canada in regard to patient privileges; specifically, the extent to which patients are permitted to leave their wards unaccompanied. The survey was undertaken after studies (4) had indicated that the planning and utilization of physical space on psychiatric wards are determined in large measure by the attitudes and practices of clinical and adminis-

trative staffs in regard to the security needs of their patients. That these attitudes and practices have currently a wide range of variation was disclosed in the replies from 292 or 94% of all State, County and VA hospitals in the U. S., Canada and Hawaii.³

DEFINITIONS

The following terms were presented to participating hospitals as a basis for their evaluation of the degree of patient privileges, and they are used in this sense throughout this paper:

OPEN WARD: A ward where the doors of the nursing unit and to the outside are unlocked during part or all of the day.

PRIVILEGED PATIENT: A patient who is permitted to leave the ward unaccompanied by staff, visitor or volunteer.

SEMI-PRIVILEGED PATIENT: A patient who is permitted to leave the ward of residence only when accompanied by staff, visitor or volunteer. This includes trips to occupational and recreational areas, but not to areas for the sole purpose of medical or psychiatric diagnosis.

NON-PRIVILEGED PATIENT: A patient who is not permitted to leave the ward at any time, except to obtain medical or psychiatric diagnostic or treatment care.

CRIMINALLY INSANE: Includes any and all of the following types of patients:⁴

- a. those admitted as insane criminals.
- b. those admitted for mental examination and observation while under charges.
- c. those charged with criminal act(s) while in a mental hospital.

SCOPE OF STUDY

The study included all public mental hospitals in the U.S., Canada, Hawaii and

³ Appreciation is expressed to the superintendents and staffs of the 292 participating hospitals who supplied the data. The tabulated raw data for each hospital was distributed to participating hospitals in September, 1957. This shows by hospital, the numbers of patients classified as privileged, semi-privileged, and non-privileged and also numbers of male, female, medical and surgical, tuberculosis and geriatric patients. This material and the statistical tables and analyses are available upon request to The American Psychiatric Association, Architectural Study Project.

⁴ This definition did not appear to be entirely clear to all respondents or to fit all the categories of hospitalized patients.

¹ This study was supported by a grant from the NIMH, United States Public Health Service to the Architectural Study Project of The American Psychiatric Association.

² Research Associate and former Director Architectural Study Project, APA, 1785 Massachusetts Ave., Washington 6, D. C.

TABLE 1

REPORTING AND NON-REPORTING PUBLIC HOSPITALS AND BEDS IN THE UNITED STATES, CANADA, HAWAII AND PUERTO RICO

	Reporting hospitals	Non-reporting hospitals	Total hospitals	Reported beds	Non-reported beds	Total beds	
State hospitals	183	10	193	508,097	27,970	536,067	
V.A hospitals	41	0	41	55,596	0	55,596	
County hospitals	31	3	34	17,946	828	18,774	
State (criminally insane).....	6	0	6	6,736	0	6,736	
Canadian hospitals	30	5	35	40,313	8,961	49,274	
Hawaii	1	0	1	1,228	0	1,228	
Puerto Rican hospitals.....	0	1	1	0	1,500	1,500	
Total	292	19	311	629,916	39,259	669,175	
Continental U. S. (not including Hawaii)	261	13	274	588,375	28,798	617,173	
	All reported hospitals..			93.89%	U. S. reported hospitals.		95.26%
	All reported beds.....			94.13%	U. S. reported beds		95.33%

Puerto Rico as listed in the Guide Issue of Hospitals, August 1956, and omitted hospitals and schools for the mentally retarded, schools for delinquents, epileptic colonies and prisons. Hospitals in 47 states, Canada and Hawaii participated. Adequate information on a prepared form and collected by mail between January and June 1957 was received from 292 or 93.96% of all mental hospitals polled with a total of 629,916 or 94.1% of all public mental hospital beds.

DATA ANALYSIS AND DISCUSSION

The objectives of the analysis were to determine the extent of variation in patient privilege practices within and among VA, State, County, Canadian and Hawaiian hospital groups and to examine possible relationships between patient privilege practices and such variables as hospital size, hospital offices, hospital ownership and doctor-patient

ratios. Also examined were the relationships among distributions of patients on the 4 levels of privilege—privileged patients on open wards, privileged patients on open and locked wards, semi-privileged patients and non-privileged patients. Data dealing with geriatric, tuberculous and medical-surgical patients were treated separately.

EXTENT OF PATIENT PRIVILEGES

Table 2 shows that 22.3% of all patients in the reporting hospitals have full privileges, 45.8% are semi-privileged and 31.9% are non-privileged. Only 57% of the total number of privileged patients are on open wards.

While the numbers of men and women in the semi-privileged and non-privileged categories are nearly equal, almost twice as many men as women are fully privileged.

Table 3 shows patient privileges by ownership of hospital. VA hospitals, as a group,

TABLE 2

PATIENT PRIVILEGES IN 291 STATE, VETERANS ADMINISTRATION, COUNTY, CANADIAN AND HAWAIIAN MENTAL HOSPITALS * CLASSIFIED ACCORDING TO SEX AND LEVEL OF PRIVILEGE

Sex	Privileged patients on open wards A		Privileged patients on all wards B		Semi-privileged patients C		Non-privileged patients D		All patients E	
	No.	%	No.	%	No.	%	No.	%	No.	%
Male	47,927	8.2	82,331	14.1	138,856	23.9	88,587	15.2	309,775	53.2
Female	26,602	4.6	47,389	8.2	127,791	21.9	97,019	16.7	272,198	46.8
Total	74,529	12.8	129,720	22.3	266,647	45.8	185,606	31.9	581,973	100.0

* Values above add both horizontally and vertically, percentages only vertically except the last column in the extreme right. This table includes 6,782 patients in six special mental hospitals for the criminally insane. The table does not include one state hospital with 503 privileged, 6,127 semi-privileged, and 4,844 non-privileged patients (total 11,474 patients) due to absence of information relative to the sex of patients.

TABLE 3

NUMBER AND PERCENT* OF ALL PATIENTS IN 202 MENTAL HOSPITALS BY DEGREE OF PRIVILEGE AND OWNERSHIP

Ownership	Privileged patients on open wards		Privileged patients on all wards		Semi-privileged patients		Non-privileged patients		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
State	54,040	11.4	95,147	20.0	219,764	46.2	160,497	33.8	475,408	80.2
VA	12,557	24.5	21,140	39.6	28,724	53.8	3,518	6.6	53,391	9.0
County	3,280	19.4	5,001	20.9	4,864	28.8	6,980	41.3	16,905	2.8
Canada	3,046	9.9	7,022	10.9	16,345	41.2	15,461	38.9	39,728	6.7
Hawaii	501	40.6	527	42.7	170	13.8	536	43.5	1,233	.2
All above ..	74,333	12.7	129,806	22.1	269,867	46.0	186,992	31.9	586,665	98.9
State (criminally insane)	196	2.9	417	6.1	2,907	42.9	3,458	51.0	6,782	1.1
All above ..	74,529	12.6	130,223	21.9	272,774	46.0	190,450	32.1	593,447	100.0

* Patients add up both horizontally and vertically. All percentages add up horizontally except those in the "Total" column at the extreme right which adds vertically.

have the smallest proportion of non-privileged patients and the largest proportion of semi-privileged patients. Except for the one territorial hospital, the VA group also shows the largest percentage of privileged patients with the County hospitals in second place. Hospitals for the criminally insane have the lowest privilege rate but over 40% of their patients are semi-privileged. Practices in Canadian hospitals do not appear to differ much from the state hospitals in the United States.

SIZE OF HOSPITAL

To examine the relationship between hospital size and patient privilege, the data were analyzed in two ways: (a) one method uses the hospital as the unit of analysis whereby hospitals of a single type of ownership are classified as "high" or "low" depending on the percent of open ward, privileged, semi-privileged or non-privileged patients in each. Each hospital thus receives 4 "high" or "low" ratings, one for each of the above levels of privilege. Then the frequency of "high" and "low" hospitals in each privilege level was determined within each of the several hospital size groups (*e.g.*, state hospitals under 1,000 beds, those between 1,000 and 3,000 and those of more than 3,000 beds). A chi-square test indicates whether the observed differences in frequency are significant. (b) The second method uses the patients as the unit of analysis. Here all

patients of a hospital, classified by ownership and size (*e.g.*, state hospitals over 3,000 beds) were identified according to the degree of privilege accorded to each patient. This procedure led to the computation of relative frequencies of patients with the 4 degrees of privilege in all the hospital groups and all sizes of hospitals.

The analyses that were performed according to the first method included an examination using the chi-square test, of a possible relationship between hospital size and the presence of "high" (more than 20%) or "low" (20% or less) frequencies of open wards, privileged, semi-privileged and non-privileged patients.

The findings indicate that state hospitals of different sizes (less than 1,000 beds, between 1,000 and 3,000, and over 3,000 beds) differ significantly (.01 level of confidence) with respect to presence of "high" or "low" percentages of privileged patients residing on open wards. The group of hospitals of more than 3,000 beds (63 hospitals) appears to include proportionately fewer hospitals with high percentages (over 20%) of open ward patients. Hospitals smaller than 1,000 beds (22 hospitals) and those of 1,000 to 3,000 beds (98 hospitals) have higher proportions of open ward patients. This is also true in regard to all privileged patients residing either in open or closed wards. A significantly larger number of state hospitals under 3,000 beds have higher percentages of open ward and privileged closed ward pa-

tients than those of over 3,000 beds. State hospitals of different sizes did not seem to differ significantly with respect to percentages of semi-privileged and non-privileged patients.

The groups of VA, county and Canadian hospitals of different sizes did not differ significantly within themselves with respect to percentages of patients on open wards, privileged on closed wards, semi-privileged, or non-privileged patients.

These findings provide some evidence that size is a correlate of patient privilege practices (or security practices) in state hospitals. This is not borne out for the other groups of hospitals.

This method of analysis, however, does not take into consideration "how much" a given hospital is "over" or "under" the 20% cutting point. Also all hospitals in a given size sub-group (*e.g.*, state hospitals of 1,000-3,000 beds) have been treated as if they all have equal number of patients.

A sharper method of analysis is available in which the patient and not the hospital, is used as the unit of analysis. Groups of hospitals of different sizes may be compared on the basis of the frequency of patients who are accorded the various degrees of privilege.

Chi-square tests again showed the difference in proportion of open ward patients (as against closed ward patients) between State hospitals of less than 2,500 beds, and hospitals of more than 2,500 beds to be significant at the .001 level ($X^2=6503$). This confirms the indication revealed above as to the inverse relationship between hospital size and proportion of patients on open wards in state hospitals—the larger the hospitals, the fewer patients on open wards. Similar tests were applied to county and Canadian hospitals in terms of the proportion of open and closed ward patients. Contrary to the results of the previous method, these tests revealed significant differences (at the .001 level) in both instances, indicating a negative relationship between size of county hospitals and percentages of open ward (vs. closed) patients. The proportion of open ward patients in Canadian hospitals also appears to be negatively related to size. These data lead to the descriptive inference that, at the present time, the larger the hospital the fewer are the

patients on open wards. However, in making comparisons between hospitals, only hospitals of similar sizes should be compared.

Comparisons were made with respect to levels of patient privilege among groups of State, VA and Canadian hospitals of similar size. This inter-group comparison was performed in the same two ways mentioned above.

Use of method (a) indicates that hospitals of similar size and of fairly similar proportions of patients in each of the 4 privilege categories are almost equally frequent among each of the state, VA and county groups. Exceptions to the above statement are as follows:

1. Hospitals with high percentage of semi-privileged patients are relatively more frequent among state hospitals than county hospitals of comparable sizes.

2. Hospitals with high percentages of non-privileged patients are more frequent among state hospitals than VA hospitals and also more frequent among Canadian than state hospitals of comparable sizes.

3. Hospitals with high percentage of privileged patients are relatively more frequent among state hospitals than among Canadian hospitals of all sizes.

For a sharper analysis, method (b) was used to investigate the relative frequency of patients on open and closed wards. State, VA, county, Canadian and Hawaiian hospitals differ significantly regarding their respective proportions of open ward and closed ward patients, as shown in Table 4.

TABLE 4

STATE, VA, COUNTY, CANADIAN AND TERRITORIAL
HOSPITAL GROUPS BY SIZE AND PERCENT OF
OPEN WARD PATIENTS

Hospital ownership and size	Percent of open ward patients
All state hospitals	11.36
State hospitals less than 1,000 beds.....	17.83
State hospitals of 2,500 or fewer beds...	17.32
State hospitals of more than 2,500 beds..	9.05
All VA hospitals	23.52
All county hospitals	19.40
All Canadian hospitals	9.93
Canadian hospitals less than 500 beds..	16.05
Canadian hospitals between 500-1,000 beds	2.99
Canadian hospitals of more than 1,000 beds	10.50
The Territorial hospital.....	40.63

The data were examined to determine interrelationships among the 4 levels of patient privilege. Percentages of open ward patients were found to correlate positively with percentages of privileged patients on all wards. Percentages of privileged patients on both open and closed wards were also found to be correlated negatively with percentages of non-privileged patients. When tested, these rank order correlation coefficients which ranged from $-.2307$ to $-.7263$ proved to be statistically significant.

The relationship between privilege practices and patient physician ratios in state hospitals was also examined.⁵ The rank order correlation between percent of open ward patients and patient-physician ratio was found not to be significant at the .05 level. Also the rank order correlation between percent of privileged patients in state hospitals and patient-physician ratio was found not to be significant at the .05 level.

The hypothesis about a relationship between doctor-patient ratio and patient privileges in VA hospitals did not prove to be tenable, since the chi-square value was not significant at the .05 level.

An exploratory examination of a possible relationship between amount of privilege (percent of privileged patients in the hospital) and the recency of the hospital (date of its opening) was next made. State hospitals were placed into groups of those opening during and through the 19th century (115 hospitals), between 1901-1920 (27 hospitals), between 1921-1940 (20 hospitals), and those opening between 1940 and the present time (21 hospitals). The percent of open ward, privileged, semi-privileged and non-privileged patients for all the hospitals in these groups were computed.⁶ The corresponding chi-square values were found not

to be significant at the .05 level. The assumption of a relationship between hospital recency and patient privileges in state hospitals is consequently rejected.

Similar analyses were performed for all the 41 VA hospitals regarding percent of privileged patients. The hospitals were classified according to the date of opening before and after 1946. The chi-square value of 4.7 with one degree of freedom is significant at the .05 level of confidence. This indicates that VA hospitals that were opened after 1946 which have higher proportions of privileged patients are significantly more numerous (9 out of 12) than those which were opened before 1946 (11 out of 28).

Available information on the VA hospitals permitted further analyses to be carried out in order to identify some other possible correlates of patient privilege. It was found that presence and absence of residency program, urban and rural location of the hospital, and sex of the patient did not seem to be related to the degree of patient privileges.

EXTENT OF PRIVILEGE PRACTICES AMONG GERIATRIC, MEDICAL-SURGICAL AND TUBERCULOSIS PATIENTS IN MENTAL HOSPITALS

In order to arrive at an over-all estimate of privileges given to patients on geriatric, GM&S and TB services in comparison to patients on all other services in mental hospitals, an analysis was made in this respect for all the patients regardless of hospital ownership. It was found that:

1. The over-all proportion of privileged patients on open wards in all the hospitals, 12.7%, is significantly greater than the same proportions for the geriatric, GM&S, and TB patients collectively, 4.3%, and separately, geriatric=4.9%, GM&S=3.0% and TB=2.9%.

2. The over-all proportion of privileged patients on all wards in all hospitals, 22.1%, is also significantly greater than similar proportions for the geriatric, GM&S, and TB patients, as a group, 10.6% and separately: geriatric=11.3%, GM&S=8.4% and TB=9.1%.

3. Again the over-all proportion of semi-privileged patients on all wards of all hospitals, 46.0% is greater than those of geri-

⁵ South Dakota, District of Columbia and Wisconsin state hospitals were not included due to absence of estimates of patient-physician ratios for them. Patient-physician estimates were based on information from Selected Tables on resident population, Finances and Personnel in State Mental Health Programs, Council of State Governments, December, 1956, tables 7 and 11.

⁶ The dates used in this analysis designate the first establishment of the hospitals. Many hospitals have added, since opening, major units in which the personnel may follow new policies in treating and caring for patients.

atric, GM&S and TB patients combined, 36.7%, and separately geriatric=39.2%, GM&S=28.6% and TB=30.5%.

4. The percentage of non-privileged patients in general 31.9% is, consequently, significantly less than that of all the 3 subgroups together 52.7%, and in each: geriatric=49.5%, GM&S=63.0% and TB=60.4%.

Our data from reporting hospitals show that the geriatric, GM&S and TB patients make up approximately 19.0%, 3.9% and 2.7% of the total number of all patients. The 3 groups together constitute about 25.6% of all patients.⁷ They, however, make up only 8.9% of all privileged patients on open wards, 12.3% of all privileged patients on all wards, 20.4% of semi-privileged patients and 42.2% of all the non-privileged patients.

The relative "contribution" of these 3 subgroups to the total population of mental hospitals is greater than their relative contribution to the privileged and the semi-privileged segments of patient population. Inversely their representation among the non-privileged segment of mental hospitals population is far greater than their over-all pro-

portion among all patients. Patients housed in geriatric, GM&S and TB services have considerably less unsupervised freedom of movement than other patients in mental hospitals. Table 5 shows that this is true in all state VA, county and Canadian and Hawaiian Hospital groups. It also shows that patients on these services enjoy on the whole more freedom of movement in VA hospitals and less in the Hawaiian and Canadian hospitals.

SUMMARY AND CONCLUSIONS

The literature reports many changes in mental hospital philosophy and attitudes that reflect on security practices. Since these practices appear to have a direct bearing on requirements for physical facilities, the Architectural Study Project sought to (a) assess the extent and degree of privilege and responsibility permitted to patients in the various types of mental hospitals in this country (b) to establish a base line in reference to security practices in order to detect future changes and trends; and (c) to identify some of the factors which might be related to security practices in mental hospitals.

A mail questionnaire sent to all public

TABLE 5

DEGREE AND AMOUNT OF PRIVILEGES OF PATIENTS ON GERIATRIC, GM&S AND TB SERVICES, AND ALL PATIENTS IN THE VA, STATE, COUNTY, CANADIAN AND HAWAIIAN HOSPITAL GROUPS

Hospital group	Level of privilege	Percent of patients on Ger. GM&S & TB services	Percent of patients on all services
VA hospitals	Privileged patients on open wards	8.33	23.5
	All privileged patients	21.70	39.61
	Semi-privileged patients	55.62	53.8
	Non-privileged patients	22.6	6.58
State hospitals	Privileged patients on open wards	4.1	11.4
	All privileged patients	9.7	20.0
	Semi-privileged patients	35.1	46.2
	Non-privileged patients	55.2	33.8
County hospitals	Privileged patients on open wards	.9	19.4
	All privileged patients	8.7	29.9
	Semi-privileged patients	35.8	28.8
	Non-privileged patients	55.5	41.3
Canadian hospitals	Privileged patients on open ward	1.2	9.9
	All privileged patients	5.5	19.9
	Semi-privileged patients	31.3	41.2
	Non-privileged patients	63.2	38.9
Hawaiian hospitals	Privileged patients on open wards	0	40.6
	All privileged patients	2.5	42.7
	Semi-privileged patients	1.3	13.8
	Non-privileged patients	96.2	43.5

⁷ These values are based on only those geriatric, GM&S and TB patients whose level of privilege is known.

mental hospitals in the United States, Canada, Hawaii and Puerto Rico, resulted in information from 94% of the hospitals which also contained about 94% of all beds in all public mental hospitals.

Analysis of the data showed that 12.8% of all the patients in all the hospitals are on open wards, 22.3% are privileged, 45.8% are semi-privileged and 31.9% are non-privileged.

State, VA, county, Canadian and Hawaiian hospitals appear to differ significantly in their patient privileges practices. VA hospitals appear to have the smallest proportion of non-privileged patients and semi-privileged patients. Except for the one Hawaiian hospital, the VA hospitals also have the largest percentage of privileged patients with county hospitals in second place. Hospitals which are primarily or entirely for the criminally insane have the lowest privilege rate. Canadian and state hospitals are fairly similar in their practices.

Variation in patient privilege practices within each hospital group seems to be related to size of the hospital. Doctor-patient ratios and recency of hospitals do not seem to be related to privilege practices except in VA hospitals where hospitals established after 1946 showed higher percentages of open ward patients than those established prior to this date. Geriatric, medical-surgical and tuberculosis services show a generally

lower privilege level than the rest of the services in mental hospitals.

The trend of present day psychiatric thinking and practice is toward the open hospital. Yet the data presented here shows that there is still a very long way to go. It would be of utmost importance to determine those factors that bear upon this issue. This study did not attempt to discover the role of staff attitudes in security practices but evidence is available (Greenblatt (2), Stanton (6), our study (4)) that this may be a key factor.

BIBLIOGRAPHY

1. Deutsch, A.: *The History of Mental Hygiene in a Hundred Years of American Psychiatry*. New York, Columbia University Press.
2. Greenblatt, M., York, R. H., and Brown, E. L.: *From Custodial to Therapeutic Patient Care in Mental Hospitals*. New York, Russell Sage.
3. Jones, Maxwell: *The Therapeutic Community (A New Treatment Method in Psychiatry)*. New York, Basic Books, Inc., 1953.
4. Ozarin, L. D., Tuma, A. H., and Guttersen, A. G.: *Hospitals*, 31: Oct. 1, 1957.
5. Russell, William L.: *The New York Hospital. A History of the Psychiatric Service 1771-1936*. New York, Columbia University Press, 1945.
6. Stanton, A. H., and Schwartz, M. S.: *The Mental Hospital*. New York, Basic Books, Inc., 1945.
7. *The Community Mental Hospital: Third Report of the Expert Committee on Mental Health—World Health Organization*, Geneva, 1953, pp. 16-19.
8. Zilboorg, G.: *A History of Medical Psychology*. New York, W. W. Norton, 1941, pp. 316-17.

CLINICAL NOTES

IPRONIAZID PHOSPHATE IN THE TREATMENT OF THE CHRONIC HOSPITALIZED SCHIZOPHRENIC

ARTHUR HOSHINO, M.D., AND EUGENE A. CEASE, M.A.¹

In order to study the effects of Iproniazid Phosphate, reportedly a "psychic energizer," on the chronic hospitalized schizophrenic patient, 64 males from the continued treatment service of the Warren State Hospital, Warren, Pa., were selected, matched according to age, duration of illness, diagnosis, previous therapy and randomly assigned into two groups: one group to receive Iproniazid, the other a placebo of identical size, shape, color and weight. These patients had not received any therapy for 6 months and were considered as stabilized in their illness.

Each patient was evaluated by a psychiatrist, ward personnel, and a clinical psychologist. Inasmuch as the double-blind method was used, these evaluators were not aware of the type of medication the patient was to receive. After a 5½-month period of treatment, during which the original dosage of 150 mg. per day of Iproniazid, was reduced in some instances because of the appearance of toxicity, the same evaluators, using identical forms, appraised the mental status of the patient again.

The psychiatrist's evaluations indicated there was no statistically significant change in the mental status of patients receiving Iproniazid, when compared to the control group receiving placebo. The P-factor was about 0.2.

The ward evaluations of the behavior of the patients indicated there was no statistically significant change in their ward behavior.

The finding of increase in body weight, due to Iproniazid therapy was not supported in this controlled study. Of those receiving Iproniazid, there was an arithmetical mean of +0.2 pounds; of those receiving placebo, there was an arithmetical mean of -3.5 pounds. Statistically, the P-factor is 0.2, indicating differences are due to chance.

Patients were evaluated psychologically by the Shipley-Hartford vocabulary test, this test being utilized because of its relatively objective nature, ease of group administration and other factors. The abstract phase was not used because the majority of the patients found it too difficult. Of those receiving Iproniazid, mean number of correct answers before medication was 14.9, at the end of study 15.0. Of those receiving placebo, the mean number of correct answers before medication was 12.2, at the end of the study 14.3. Statistical evaluation of the change shows the difference is due to chance and is not of significance, the P-factor being 0.5.

For 44% of those receiving Iproniazid, the daily dosage remained 150 mg. First signs of toxicity appeared in the average of 10.2 weeks for the 56% who required lowering of the original dosage of Iproniazid.

In summary, in a carefully controlled double-blind study, Iproniazid was found to have no significant effect in the mental state of the chronic hospitalized schizophrenic.

¹ Warren State Hosp., Warren, Pa.

A COMPARISON OF RHYTHMIC AND NON-RHYTHMIC MUSIC IN CHRONIC SCHIZOPHRENIA

AARON GILLIS, M.B., C. F. LASCELLES, M.B., AND NORA CRONE, M.B.¹

The value of music in the treatment of mental illness has been discussed over the

¹ Cherry Knolls Hospital, Ridge, Sunderland, England

years. The literature is reviewed by Soibelman (1948). Attempts at objective assessments have been few and often lacked validity. The attention of the authors was

drawn to a form of dance music showing as a chief characteristic a strongly pronounced rhythm which appeared to act on its devotees as a powerful stimulus leading them to the performance of extremely energetic and long-sustained rhythmic movements (Rock 'n Roll); and this led them to feel that this type of music might be used in an attempt to rouse chronic schizophrenic patients from their apathy and inertia. A series of controlled observations on two groups of 25 chronic schizophrenic patients was undertaken, the second group acting as a control. Each group was subject to two one-hour sessions of rhythmic and non-rhythmic music respectively for a week. Assessments were made of each individual patient by a psychiatrist and a nurse before and after the experiment. The psychiatrist used a 10 unit scale modified from the scales used by Malamud *et al.* (1951). The rating scale applied by the nurse was the Albany Behavioural Rating Scale, Shatin and Freed (1955). The clinical assessments of the rhythmic group showed 9 improved out of 20 and in the rating scale assessments there were 9 improved out of 25. In the non-rhythmic group there were 9 improved out of 25 in the clinical assessments and 8 out of 26 in the rating scale assessments. That is to say that a substantial number of patients in both groups showed appreciable improvement. A sex difference appeared in that the females

in the rhythmic group showed a relatively greater improvement than those in the non-rhythmic group.

CONCLUSIONS

Music applied in a *therapeutic atmosphere* leads to clear cut clinical improvement in chronic hospitalised schizophrenics. In these observations there was no advantage of quick rhythmic music over non-rhythmic music. Analysis of results by sex shows that the female group tended to derive more benefit from rhythmic music than the male group.

SUMMARY

Two groups of chronic schizophrenic patients attended twice-weekly sessions of rhythmic and non-rhythmic music respectively for 6 months. Assessments were made by psychiatric interview and rating scale before and after this period. Appreciable improvement occurred in both groups. The female group showed a particularly good response to rhythmic music.

BIBLIOGRAPHY

- Malamud, W., *et al.*: Boston Med. Quart., 2: 1-7, Mar. 1951.
 Shatin, I., and Freed, E. X.: J. Ment. Sc., 101: 644-53.
 Soibelman, D.: Therapeutic and Industrial Uses of Music, 1948.

USE OF CHLORPROMAZINE COMBINED WITH PROCLORPERAZINE

JOSEPH A. BARSA, M.D.¹

In an earlier study(1) on the treatment of chronic schizophrenics with proclorperazine alone in doses up to 900 mgs. a day, it was found that, although this drug was an effective one, its usefulness was diminished by the high incidence of extra-pyramidal side-effects, such as, rigidity, tremors and postural symptoms. These side-effects were more marked as the dosage became higher. Because of this it was decided to try a combination of drugs whereby the proclorpera-

zine could be used in smaller doses, at the same time retaining its effectiveness. Thus the combination of chlorpromazine (Thorazine) and proclorperazine (Compazine) was used.

The first group of patients consisted of 10 chronically disturbed female psychotic patients. Nine were diagnosed as schizophrenic and one as involutional psychosis, melancholia. Their ages ranged between 24 and 57. All of the patients had previously been treated with chlorpromazine alone in doses

¹ Rockland State Hospital, Orangeburg, N. Y.

up to 1800 mgs. a day for 6 months, and later with prochlorperazine alone in doses up to 900 mgs. a day for 5 months without noticeable improvement. These patients were then treated with a combination of chlorpromazine and prochlorperazine. The dose of chlorpromazine was not greater than 800 mgs. a day and the dose of prochlorperazine not greater than 100 mgs. a day. At the end of 6 months the patients were evaluated as follows: 3 patients were moderately improved, that is, although they were not well enough to live outside of a hospital, their behavior had improved to such an extent that they were now usually cooperative and adjusting fairly well to the hospital environment; 3 patients were slightly improved, that is, they were a little easier to manage but still manifested excited, assaultive or destructive behavior; and 4 patients were unimproved.

Because of the encouraging results in this pilot study, a larger group of 100 female schizophrenic patients was selected. Their ages ranged from 17 to 65 years, and their present hospitalization was from 2 to 25 years. They manifested a variety of behavior; some were extremely withdrawn, seclusive, preoccupied, apathetic; others were disturbed, excited, restless, overtalkative, and still others were very hostile and paranoid in their attitude and behavior. All of the patients had been previously treated with chlorpromazine alone in doses up to 1800 mgs. a day for 6 to 12 months with slight or

no improvement in their symptoms. The patients were then treated with a combination of chlorpromazine and prochlorperazine for 6-12 months. The dose of chlorpromazine was usually between 100 and 150 mgs. 4 times a day, and not more than 800 mgs. a day. Although the dose of prochlorperazine varied between 5 and 25 mgs. 4 times a day, the more common dose was 10 mgs. 4 times a day. After treatment with combined chlorpromazine-prochlorperazine the patients were evaluated as follows: 10 markedly improved, that is, in remission and able to be released from the hospital; 22 moderately improved, 48 slightly improved, and 20 unimproved.

In this combined therapy side-effects were minimal. By keeping the dosage of chlorpromazine low an excessive sedative or retarding effect was avoided, and by keeping the dose of prochlorperazine low the extrapyramidal symptoms were reduced in frequency and severity. Furthermore, in my experience this combination of drugs has proved to be the most potent in combating the delusions and hallucinations of the schizophrenic, and should be used in all cases not responding to chlorpromazine or prochlorperazine alone.

BIBLIOGRAPHY

1. Kline, N. S., Barsa, J. A., Bruckman, N. S., and Saunders, J. C.: The Use of "Compazine" (Prochlorperazine) in a Variety of Psychiatric Conditions: presented at Regional Research Conference of Am. Psychiat. Assoc., Nov. 1956, Philadelphia, Pa.

ORPHENADRINE IN THE TREATMENT OF DEPRESSION A PRELIMINARY STUDY¹

JONAS B. ROBITSCHER, M.D., AND SYDNEY E. PULVER, M.D.²

Some of the drugs introduced in recent years for the psychiatric patient were originally designed for other purposes and have been discovered only incidentally to sedate, "tranquelize," or otherwise benefit the emotionally disturbed patient. One recent drug introduced for the treatment of Parkinsonism and muscle spasm, orphenadrine hy-

drochloride (Disipal),³ has been noted to have as a side effect a euphoric action. The authors therefore decided to study the effects of orphenadrine on depression in a small group of psychiatric patients.

Orphenadrine hydrochloride (B-dimethylaminoethyl 2-methylbenzhydryl ether hydrochloride) is a derivative of the antihistamine

¹ This study was carried out at the Philadelphia General Hosp.

² 4401 Market St., Philadelphia 4, Pa.

³ Orphenadrine hydrochloride used in this study was supplied as Disipal by Riker Labs., Inc., Los Angeles, Cal.

diphenhydramine but has little antihistaminic activity itself; it is unusual in causing central nervous system stimulation rather than the depression common with some other anti-Parkinsonism agents.

The euphoric effects of orphenadrine were noted by Doshay and Constable⁽¹⁾ who have reported on 176 cases of paralysis agitans treated with orphenadrine. They reported that weakness, tiredness, and mental depression, frequent symptoms of paralysis agitans, were often alleviated by orphenadrine with no increase of tremor. They stated that "orphenadrine exerts a highly selective action in providing a feeling of well-being to depressed and discouraged patients and energy, strength, and activity to weak and incapacitated individuals." They further stated that "mental depression was corrected in 31 of 37 patients (84%)" and that of 10 patients in the series with mental confusion, obsessions, delusions and hallucinations, 7 were improved.

In the present study 12 hospitalized psychiatric patients and 2 outpatients with depressive features have been given orphenadrine. The hospitalized patients were selected from routine admissions to a public urban psychiatric hospital who showed symptoms of or complained of depression and fatigue; the chief criterion in the selection of the hospitalized patients was that they were under consideration for electroshock therapy. The outpatients were selected because of a lack of improvement on other forms of chemotherapy. The patients included 7 cases of involutional psychotic reaction, 2 manic-depressive depressed, 1 psychotic depression, 2 paranoid schizophrenic reaction (with marked depressive features), and 2 cases of psychoneurotic depressive reaction. In this preliminary study, a control group was not used. The dosage of orphenadrine was that recommended for paralysis agitans, 50 mg. three or four times daily, since only minimal adverse side reactions have been reported with these dosages. With the exception of 2 patients who received chlorpromazine in addition to orphenadrine, administration of other drugs, including night-time sedation, was omitted except on special order.

Beneficial effects most frequently noted

by patients themselves included increased appetite, more restful sleep, less difficulty in falling asleep, more optimism concerning the future, less anxiety and agitation. In addition it was observed that the patients showed better socialization, more cooperation with hospital personnel, and a decrease in confusion.

The patients were rated clinically by the authors twice weekly and at the completion of therapy as follows: *recovered*, able to leave the hospital and return to work free of symptoms; *much improved*, able to leave the hospital but with some remaining symptoms; *moderately improved*, symptomatic improvement not sufficient for discharge from the hospital; *no improvement*, no relief of symptoms. Of the 14 patients in the series, after trials of therapy of not more than 6 weeks, 2 were rated as recovered, 3 as much improved, 4 as moderately improved, and 5 as no improvement. The 2 cases rated recovered were both in the involutional psychotic reaction classification but 3 other patients in the same classification showed no improvement.

Doshay and Constable in their series noted no serious adverse side reaction, although some of their patients reported excitation, dryness of the mouth, clouding of the mind, increase of tremor, nausea, and insomnia. Gastric upset, dizziness, drowsiness and urinary retention have also been reported as side effects by other observers. In this study, dizziness, nausea and dryness of the mouth were reported by a few patients, but these reactions were transitory and did not interfere with therapy.

SUMMARY

In this preliminary study, 14 psychiatric patients with depressive features were treated with orphenadrine to determine if the euphoric action, previously reported as a side-reaction in nonpsychiatric patients, occurs and is beneficial in depression. Two of the patients were rated as recovered; 9 showed beneficial effects including improved behavior, more optimism concerning the future, decreased anxiety and agitation. Further studies with adequate controls and a double blind technique are warranted to de-

termine if orphenadrine can prove useful in the treatment of depressed psychiatric patients.

BIBLIOGRAPHY

1. Doshay, L. J., and Constable, K.: J.A.M.A., 163: 1352, April 13, 1957.

EXPERIENCES WITH MARSILID WITH REPORT OF ONE DEATH

ERWIN R. SMARR,¹ M.D., HERMAN WOLF, M.D.,¹ AND MAURIE D. PRESSMAN, M.D.

Iproniazid has been recently introduced into clinical practice as a "psychic energizer." (1, 2, 3, 4). The following reports result from a clinical study with 25 patients from private and clinic practice, selected because of their depressive and/or anergic symptomatology. Because of the increasing use of this drug and its convincing therapeutic action as well as its demonstrated toxicity, we feel that it is important to present this data, since so few data have been published from the clinical usage. We realize that the evaluations are clinical and are not validated by more exacting research (5, 6).

Marsilid was given in initial dosage of 150 mg. per day in 24 cases and 100 mg. in one case. Dosage was uniformly maintained until the appearance of improvement or toxicity, and then gradually reduced according to clinical indication. The total duration of administration varied from 23 days to 25 weeks, and the total dosage varied from 1.4 gms. to 23.1 gms. The median total dose was 5.0 gms. In 21 cases serum transaminase determinations were made at 4-week intervals, and CBC and urinalyses were done at the start of treatment and periodically as indicated.

RESULTS

Improvement here is defined as over and above the results obtained with previous drugs, ECT (4 cases), or no treatment. Sixteen cases (64%) improved and 9 (36%) were unimproved; no patients were made psychologically worse. Of the total group 4 (16%) showed marked improvement, 11 (44%) moderate improvement and only 1 (4%) slight improvement. These figures show a higher improvement rate than those of Ayd (7). Among the 4 markedly improved all were depressions: 2 involutional, and 2 chronic neurotic depressions. Among

the moderately improved there were 5 involutional depressions: 1 neurotic depression, chronic; 1 manic-depressive, depressed; 2 chronic anxiety reactions with phobias, depression and obsessions; 1 acute neurotic depression; 1 schizo affective reaction. The one case of slight improvement was a manic-depressive, depressed. Those unimproved included 3 chronic neurotic depressions, 1 involutional depression, 1 anxiety reaction, 1 passive dependent personality, 2 paranoid schizophrenics, and 1 chronic undifferentiated schizophrenic. Improvement, when it occurred, usually began at about 2-3 weeks. Minor toxic symptoms tended to appear at the same time. If there was not at least moderate improvement by the end of the fourth week, no improvement followed.

Toxicity.—In the order of frequency side effects included: dizziness, hyperreflexia, insomnia, light-headedness, dry mouth, hypotension, muscular irritability, peripheral neuropathy and neuralgia, palpitations, edema, dysuria, jaundice, convulsions, palmar erythema, ataxia, tremulousness, generalized aches, and hot flushes.

The most important toxicities included 2 cases of jaundice (one died), 1 patient who had a convulsive seizure when the dosage was rapidly reduced in the third week, and 3 patients with painful tender gums. A third case of jaundice is probably homologous serum hepatitis, to which the Marsilid may have been contributory.

Jaundice.—Case #1 had received the drug for 5 weeks, for a total of 3.25 gms., and jaundice developed 3 days after discontinuance. Case #2 had received Marsilid 33 days, total dosage 3.75 gms., and jaundice appeared 20 days after discontinuance. Case #3 received 6.75 gms. in 12 weeks. She was still receiving 50 mg. per day when she developed fulminating hepatitis, and died 8 days later. Autopsy was not granted.

The serum glutamic oxylacetic transami-

¹ Eastern Pennsylvania Psychiatric Institute, Philadelphia, Pa.

nase was used as a sensitive screening of possible hepatic toxicity at 4-week intervals before and during administration in 21 of the 25 cases. Upon abnormal rise the dosage was usually reduced, with subsequent fall of transaminase level. In 3 cases the same dosage was continued and the transaminase level returned to normal despite the drug.

CONCLUSIONS

Marsilid has proven to our satisfaction that it is the most effective chemical to appear so far for the treatment of ambulatory depressions. Its action is physiological. We do not know its effectiveness for patients severely depressed enough to require hospitalization. Several of our patients did not require ECT, which we would otherwise have prescribed. The drug is apparently toxic to a dangerous degree to certain individuals, and toxic to very mild degrees in others. Perhaps it is a safe drug to use for a limited period. It is unclear whether total dosage, duration of treatment, or purely idiosyncrasy are related to these hepatitis

reactions. This is an important therapeutic advance which should be pursued further, but a safe regimen needs to be worked out as more data are accumulated.

BIBLIOGRAPHY

1. Loomer, H. P., Saunders, J. C., and Kline, N.: Iproniazid, An Amine Oxidase Inhibitor as an Example of Psychic Energizer. *Psychiatric Research Reports*, in press.
2. Crane, G. E.: A New Pharmacotherapeutic Approach to Certain Psychiatric Disorders. *Psychiatric Research Reports*, in press.
3. Saunders, J. C., Loomer, H. P., and Kline, N.: A Theoretical and Clinical Approach to Treating Depressed and Regressed Patients with Iproniazid. *Psychiatric Research Reports*, in press.
4. DeVertuil, R. L., and Lehmann, H. E.: *Can. Med. J.*, **78**: 131, 1958.
5. Smarr, E. R., and Rashkis, H. A.: *A.M.A. Arch. Neurol. & Psychiat.*, **77**: 202, 1957.
6. Smarr, E. R., and Rashkis, H. A.: A Method for the Control and Evaluation of Sociopsychological Factors in Pharmacological Research. (Paper delivered at A.P.A. Regional Research Conference, Phila., Nov., 1956), in press.
7. Ayd, F. J., Jr.: *Am. J. Psychiat.*, **114**: 459, 1957.

THE USE OF ORAL HYPOGLYCEMIC AGENTS IN THE TREATMENT OF SCHIZOPHRENIA

CARL GOULDMAN, M.D.,¹ HARRY HENDERSON, M.D.,² DOROTHY CHRISTIAN, R.N.,³
AND JACKSON A. SMITH, M.D.,⁴

In 1942 Janbon and Lazerges(5) noted the hypoglycemic effect of sulphanilamido-isopropyl-thiodiazole in normal subjects when taken orally. Loubatieres(6) (1944), Bovet and Durost(2) (1944) extended the work with oral hypoglycemic agents. In 1955, Achelis and Hardebeck(1) noted that carbutamide produced "a certain euphoria" in healthy subjects. Franke and Fuchs(3) the same year reported that carbutamide reduced the blood sugar in diabetics (D 860), and Arno Voelkel(7) described the use of nadisan, an oral hypoglycemic agent, in com-

bination with insulin in the treatment of psychotic patients.

In a paper delivered in 1957, Frost(4) reported that carbutamide had a euphorizing and anti-hallucinogenic effect in 24 of 30 schizophrenic patients treated. He introduced the etiological possibility of schizophrenia's being an encephalopathy of toxic-infectious origin which could be favorably affected by the bacteriostatic action of sulphonamides.

METHOD

In an effort to duplicate this encouraging report, a group of 41 chronic schizophrenic patients were given carbutamide (Orinase, a chemically similar hypoglycemic agent) orally in a dosage of 0.5 grams twice daily for six weeks. To more adequately appraise the results of treatment, patients in two

¹ Staff Physician, Hastings State Hospital, Ingleside, Nebr.

² Resident Psychiatrist, Nebraska Psychiatric Institute, Omaha, Nebr.

³ Research Nurse, Norfolk State Hospital, Norfolk, Nebr.

⁴ Director of Research, Nebraska Psychiatric Institute, Omaha, Nebr.

state hospitals were included in the group. They were evaluated separately, using similar criteria, by different observers (16 patients in one hospital and 25 in the other).³

These patients had been hospitalized an average of 17.2 years, their average age at the time of the study was 48.9 years, and at the time of their admission to the hospital their average age was 31.7 years. Twenty-seven of the patients were women and 14 were men. The majority of these patients had been refractory to one or more of the following therapies: metrazol, insulin coma, electric shock, lobotomy, and tranquilizers. They were chronic patients.

A control mental status examination was done prior to the initiation of the project and at its completion by the same observer. Weekly progress notes which included the interviewer's recorded impression of behavioral change and the opinions of ward personnel were included. Leukocyte counts and blood sugar determinations were done on 16 of the patients twice weekly.

RESULTS

Of the 39 patients who completed the study, only two showed changes considered

³ This study was supported in part by a grant from The Upjohn Company, Kalamazoo, Mich., who also furnished the drug. Supported in part by Nebraska Board of Control Fund for Psychiatric Research.

to be significant. One of these two patients, diagnosed a schizophrenic reaction, catatonic type, who had been hospitalized 24 years, became briefly active and cooperative; the second, diagnosed schizophrenic reaction, simple type, became more appropriate, friendly and interested. These changes were interpreted as resulting from spontaneous change and attention rather than a specific response to the treatment.

No significant variation in the blood glucose level was noted. No significant effects on behavior which could be attributed to the drug were noted in this study.

BIBLIOGRAPHY

1. Achelis, J. D., and Hardebeck, K.: *Deutsche Med. Wschr.*, 80: 1452.
2. Bovet, D., and Durost, P. C.: *Rendus de la Soc. de Biolog.*, 138: 830, 1944.
3. Franke, H., and Fuchs, J.: *J.A.M.A.*, 159: 1328, 1955.
- Idem. *Deutsche Med. Wschr.*, 40: 1449, 1955.
4. Frost, Isaac: "Carbutamide (B.Z.-55) in the Treatment of Schizophrenia." Read at second International Congress of Psychiatry, Zurich, Sept. 1957.
5. Janbon, M., Lazerges, P., and Metropolitan J.H.: *Montpellier Medical*, 6: 489, 1942.
6. Loubatieres, A. C.: *Rendus de la Soc. de Biolog.*, 138: 830, 1944.
7. Voelkel, Arno: *Klinische Wochenschrift*, 34: 210, Feb. 15, 1956.

MANAGEMENT OF SEVERE CHRONIC PSYCHOTICS WITH SUSTAINED RELEASE CHLORPROMAZINE

HENRY STARAS, M.D., AND THOMAS TOURENTES, M.D.¹

The efficacy and possible advantages of a single daily dose of chlorpromazine in sustained release Spansule² form was investigated with 20 severely psychotic chronic patients whose institutional adjustment had been stabilized at significantly improved levels for many months or years previously by divided daily doses of chlorpromazine in conventional tablet form.

All had been extremely combative, agi-

tated, and destructive before the advent of chlorpromazine, and although they were greatly improved in this respect, general appearance, thinking, affect, and socialization remained quite pathological. They ranged in age from 37 to 79 years, with a mean age of 57.1, and hospitalization ranged from 4 to 45 years with a mean stay of 15.8 years. Sixteen carried a schizophrenic diagnosis, and 4 were classified as organic brain syndromes. Daily chlorpromazine intake ranged from 100 to 400 mgs., with a mean dosage of 180 mgs.

They were divided into matched groups.

¹ From the Galesburg State Research Hospital, Galesburg, Ill.

² Chlorpromazine Spansules were provided by SKF Laboratories, Inc.

Group I, 10 patients, received a single daily morning Spansule of chlorpromazine equivalent to the total daily individual amount received previously in tablets. Group II, 10 patients also, were given a single daily Spansule, but previously established dosages were reduced from 25% to 50% to determine if improved behavior could be maintained on less chlorpromazine intake. Three of these patients received their medication at bedtime because disturbed behavior occurred mainly at night. Patients of both groups were observed routinely on daily ward rounds, and interviewed weekly to record finer changes in mental status. Ward nursing and incident records were consulted for additional information bearing on behavior. After two months dosage schedules were reversed for the two groups and observations continued for another month.

RESULTS AND CONCLUSIONS

No immediate loss of drug control occurred during the transition phase, and no undesirable physiological side effects were noted at any time. Precautionary bed rest immediately following intake to obviate hypotensive effects was found unnecessary. These observations indicate a satisfactory

initial rate of release of the active drug by the special vehicle. However, 5 patients in Group I relapsed to former disturbed behavior within a few days. This disturbance occurred at night indicating a drop in effective drug levels 12 to 16 hours after ingestion. All patients manifested increased disturbance when former optimum daily dose levels were reduced. Three Group II patients had trouble falling asleep on reduced dosage presumably because of the slower rate of release of the active drug, and one developed nocturnal enuresis probably as a result of the more prolonged sedation. Resistant suspicious patients seemed more accepting of the single morning Spansule and required less persuasion than with multiple tablets.

Initial control and adjustment of maintenance requirements is achieved more easily by the quicker acting tablets, but subsequent medication with Spansules is convenient and economic of personnel time and effort, and permits uninterrupted attention to the other important aspects of patient care programs. Further refinement of the rate of release to provide more sustained drug activity after 12 hours, and adaptation of the delayed release principle to other psychotropic agents seems advisable.

TRILAFON TREATMENT IN PSYCHOTICS

I. I. WEISS, M.D., J. H. RUBINGER, M.D., M. SORIN, M.D., AND N. RYZEN, M.D.¹

Perphenazine (Trilafon) a new phenothiazine ataraxic was prescribed for 10 months for 363 chronic, psychotic females. They were selected regardless of diagnosis, and suffered from a variety of functional and organic illnesses. Ill-effects were not noticed in the 2.7% using 96 to 320 mg. daily. Daily dosages ranged from 8 to 64 mg. in 97.27%. Small amounts of other ataraxics were used at first by 10% early in the survey.

Extrapyramidal symptoms appeared in 38.3%; this would be less if male patients were included, since high incidence in females has been noted with other phenothiazines too. Cogentin, Artane, and Pagitane

eliminated them; and subsequently even larger doses were tolerated without their reappearance when antiparkinsonian preparations were discontinued. The same type of side-effects complicated treatment with Trilafon as with other phenothiazines but they presented no management problem in the hospital setting. Occasionally doses were lowered; sometimes other medications were given as symptomatic treatment. Jaundice was not seen. Disturbances in temperature and blood pressure were not observed. Over-sedation was rare and depression did not appear.

A severe shock-like state with convulsions was a medical emergency in 4 patients. Although the pulse rose to 120, blood pressure was not altered. Coma was deep with sali-

¹ Staff, Stockton (California) State Hospital.

vation and perspiration profuse. The body assumed a fetal position with limbs flexed and rigid. Intramuscular amytal was followed by deep sleep for three or four days. They subsequently used Trilafon uneventfully.

Trilafon was discontinued in 4 cases when patients became too disturbed; in 3 when extrapyramidal symptoms were not relieved by antiparkinsonian medications; in 4 when severe shock set in; in 2 when convulsions were hard to control; and in 3 when the blood granulocytes were noticeably reduced.

Discontinuing treatment in 5.6% of patients is about the same as experiences with other phenothiazines. Improvement was noted in 74.7% ; but 14.3% were not helped ; and 5.5% got worse. Only 7.7% left the hospital following improvement with Trilafon ; many more could have left, had social resources been available to them. Extra-

mural care and housing facilities must be developed to a greater degree than is currently available to get maximum benefits for patients using ataraxics in a state hospital. Other patients not using medication benefited indirectly from the improvement in the ward milieu accompanying this treatment.

In contrast with other phenothiazines, Trilafon was found more potent and more rapid in controlling behavior disturbances. Smaller amounts were needed and less drowsiness was noted. Younger patients responded better than oldsters. Resistance to taking Trilafon was less than that found in using other ataraxics. Weight gain was less than conventionally found in treatment with tranquilizers. The impulsive, unprovoked disturbances and assaultiveness of lobotomized patients was not influenced by this most potent tranquilizing drug.

CASE REPORTS

TREATMENT OF A CASE OF PSYCHOTIC DEPRESSION COMPLICATED BY AORTIC HOMOGRAPH REPLACEMENT

J. WEATHERLY, M.D.,¹ AND L. M. VILLIEN, M.D.

In May, 1955, a 53-year-old man had a routine chest x-ray that revealed a lesion of his descending thoracic aorta. Further studies proved this to be an aneurysm of arteriosclerotic origin. Two months later, under hypothermia with a low of 85.5° F., the aneurysm was removed through a left thoracotomy, and a homograph replacement was inserted. The total occlusion time was 53 minutes.

Two weeks later, hemorrhage from a duodenal ulcer necessitated a subtotal gastrectomy.

His recovery from both operations was uneventful, and two weeks after the second operation he was discharged from hospital surgical care with diet, meprobamate, and nocturnal sedation prescribed.

His physical condition remained satisfactory, but within a month after he returned home, he began to have trouble in making decisions, could not work, lost sleep, became morose and seclusive, thought that his family was against him, and brooded about suicide. His emotional state slowly but constantly worsened until psychiatric hospitalization became necessary—8 months after his major surgery.

For a while after his admission he tried to mask his feelings, attempted to conform to "normal" ward activities, and feigned interest in his surroundings. This fragile facade quickly crumbled under the relentless pressure of his psychosis, and he became acutely depressed, mentally retarded, and grossly delusional: "I've lost everything, and I have no home. I'm not entitled to be here." Grandiose guilt feelings appeared: "I'm responsible for the death of thousands of people." He begged to see his family, but their visits were dominated by his insistence that his life and fate were "hopeless."

He was diagnosed as having a severe psychotic depression, and EST was recommended. However, the possible effects of this treatment in a person having an aortic homograph were unknown, and further complicated by medical opinion from the patient's family that EST was a pansule and question.

The patient's physical examination was not remarkable with the exception of maintaining cardiovascular fitness. More easily peripheral vessels were markedly dilated. 2. a blood pressure reading of 230/130 the same in both arms, sitting and standing (this was in marked contrast to his blood pressure prior to and shortly after his aortic surgery when it had remained stable at 130/80; 3. his pulse sitting was 84, regular and strong; 4. funduscopy showed minimal angiopathy without retinopathy; 5. his heart was of normal size, and no murmurs were present although A₂ was accentuated.

Laboratory findings were as follows: 1. R.B.C., hematocrit, and sedimentation rate were normal; 2. serology was negative; 3. EKG was borderline; 4. N.P.N., B.U.N., and creatinine were high normal; 5. x-rays showed the residuals of thoracic surgery, the residuals of subtotal gastric resection with the stomach holding 250 cc. barium without discomfort, and a freely patent stoma without dumping.

Routine hospital care, diet, tranquilizers, and antihypertensive drugs soon reduced his blood pressure to a level around 160/90. His moderate azotemia improved, and within 8 weeks his previously moderately elevated B.U.N., N.P.N., and creatinine returned to normal.

As his physical condition seemed as improved as possible and as his mental condition showed no signs of spontaneous improvement predictable within a reasonable

¹ V.A. Center, Gulfport Div., Biloxi, Miss.

length of time, permission for treatment was obtained.

Eight electric shock treatments were administered as follows: atropine, 1/100 gr. hypodermatically; succinyl chloride (Anectine), 1 cc. intravenously; 120 volts for 0.5 seconds.

No untoward physical effects were seen, and the clinical results were good in that his depression, delusions, mental retardation, and guilt feelings disappeared. His improvement was maintained, and several weeks after the treatment was completed, he was sent

back to the hospital.

Results of treatment

tients is a

other pher

noted in 7

and 5.5%

hospital for

for

SUMMARY

1. A 53-year-old man with an acute psychotic depression received electric shock treatment a year after an aneurysm of his descending thoracic aorta was replaced by a homograft.

2. Although the patient also had hypertension, good clinical results were obtained without the development of untoward cardiovascular effects.

3. It is not considered that an aortic homograft is a contraindication to electric shock treatment.

HISTORICAL NOTES

A NOTE ON WAGNER-JAUREGG

ZIGMOND M. LEBENSOHN, M. D.¹

A nation may honor one of its distinguished citizens in many ways. Surely, one of the most impressive is to have his portrait engraved on the face of the national currency.

As far as is known, Professor Julius Wagner von Jauregg, who was awarded the Nobel Prize in Medicine in 1927 for discovering the malarial therapy of general paresis, is the only psychiatrist in the world to have been so honored. In December 1953, the Austrian Government issued its new 500 Schilling note on which Professor Wagner-Jauregg's portrait appears. Many psychiatrists visiting Austria in recent years have probably used this currency without being aware of its special interest. In order to familiarize readers of the JOURNAL with this insufficiently known fact, a photograph of the banknote is herewith reproduced.

In addition to its interest for psychiatrists, this banknote attracted widespread approval for its artistic qualities. In characteristic Viennese style, a contemporary newspaper, *Die Presse*, December 4, 1953, praised it lavishly, as illustrated by the following translated excerpt: "In the printing office of the National Bank two huge machines are working on the production of the

new banknote of 500 Schillings, which will be issued for the first time early on Saturday (December 5, 1953). To anticipate: it is beautifully done; it is a masterpiece, which will be greatly admired. Even the layman will realize that the printer has done an outstanding job in the production of these notes. Also, one will agree that the latest product of the National Bank is 'artistically flawless.' Moreover, the five hundred Schilling note is so handsome that one will use it as money only with reluctance. The serious, striking countenance of the Nobel Prize winner, Professor Julius Wagner-Jauregg, looks at the owner of the note and with his penetrating gaze the learned man seems to be saying, 'Keep this in honor and don't give it to anyone else.'"

I wish to express my gratitude to Dr. Maximilian Silbermann whose recent tribute to Wagner-Jauregg¹ on the centenary of his birth impressed me anew with his stature; and to Professor Hans Hoff of Vienna (present head of the University Clinic) who generously provided me with photographs and newspaper references.

BIBLIOGRAPHY

1. Silbermann, M.: *Am. J. Psychiat.*, 113: June 1957.

¹ 1712 Rhode Island Ave., N. W., Washington 6, D. C.



Austrian 500 Schilling Note Bearing Portrait of Wagner-Jauregg

COMMENT

CORRECTIONAL PSYCHIATRY

In the December, 1957 issue of *The American Journal of Psychiatry* (pp. 481-487) W. S. Wille summarizes the findings of a recent survey of psychiatric facilities in prisons and correctional institutions in the United States. This survey, based on answers to questionnaires sent in 1954 to all listed state and federal correctional institutions, revealed severe inadequacies in psychiatric facilities, especially in personnel. In view of the generally gloomy picture presented by this survey, it is perhaps of some value to point out that one prison system—municipal rather than state or federal—has within the past two years made revolutionary advances in this area.

The New York City Department of Correction operates 5 detention institutions and 4 sentence institutions with an annual admission of over 100,000 and a daily average census of over 6,000. Before the year 1955 these institutions received only the most nominal kind of psychiatric service, provided by a single full-time psychiatrist and two psychologists. In the year 1955, under the impetus furnished by a psychiatrically oriented commissioner, a Diagnostic Center was created and a chief psychiatrist was appointed to organize psychiatric services. Funds for new personnel were provided by the New York City Community Health Board on a matching basis.

At the present time (January, 1958) the Diagnostic Center employs 33 full-time professional personnel, or over one-ninth the total of such personnel (295) reported by the survey for all other correctional institutions in the United States. The staff includes 7 full-time psychiatrists (there are an additional 3 part-time), 14 psychologists, 10 psychiatric social workers, one rehabilitation counsellor and one administrative supervisor (Ph. D. in sociology). Both diagnostic and treatment services are provided for the 3 main sentence institutions (2 for men and one for women) as well as for the detention institution for adolescents. A psy-

chiatric inpatient service has been set up in the main prison hospital, with separate sections for quiet and disturbed patients. Prompt segregation and psychiatric observation of disturbed or potentially disturbed inmates, with the use of chemotherapy and/or psychotherapy, has significantly improved the handling of these problem inmates. The detention program for adolescents, revolutionary in nature and scope, has provided means for housing these inmates on a scientific basis and for initiating early psychiatric treatment.

The present facilities, while vastly superior to any previously existing, are still sorely inadequate, especially as regards the treatment of large numbers of inmates. Expansion is still under way, both as to personnel and physical facilities, *e.g.* an electroencephalograph will soon be available. A research project is being developed, in close integration with the regular psychiatric services. A Correction Academy for inservice training of both custodial and civilian personnel has been created, and psychiatric staff personnel are intimately involved in this program. Newly appointed custodial staff members are routinely given psychological and (where indicated) psychiatric screening during their period of training, before final appointment. As elsewhere in the United States (see above cited survey), the problem of introducing a program of this kind in a tradition-minded correctional setting has had to be met, but much progress has been made in its solution. It can be reasonably hoped that a fully integrated psychiatric staff working in a psychiatrically oriented custodial setting will soon become a reality, with consequent improvement in the treatment and rehabilitation of the prison inmate.

PAUL K. BENEDICT, M. D., PH. D.,
Chief Psychiatrist, Department
of Correction,
400 East 53rd St.,
New York City.

NEWS AND NOTES

SCHIZOPHRENIA AS A PUBLIC HEALTH PROBLEM.—Further to his appeal for the creation of a specific foundation to solicit public interest and support for research in schizophrenia (Am. J. Psychiat., Dec. 1957, pp. 557), Dr. Stanley R. Dean reports that Congressman Albert P. Morano (Conn.) arranged to have Dr. Dean and Mrs. Godfrey S. Rockefeller appear before a Congressional Committee on Appropriations for Health, Education and Welfare (chairman, Congressman John E. Fogarty, R. I.) on February 27, 1958, to bring the Committee's attention to the importance of specific research on the nation's major mental health problem.

Following this meeting, Congressman Fogarty informed Dr. Dean "that the Institute of Mental Health had taken a complete area analysis of its own research expenditures in this field. . . . In the Bethesda Labs. \$3,265,000 is being devoted to research in schizophrenia. In addition, more than \$5,000,000 of fiscal year 1958 appropriations is being awarded this year . . . in support of research on schizophrenia by non-governmental research workers. . . ."

Furthermore, the Congressional Record of March 27, 1958, reports that Chairman Fogarty asked for and obtained an additional \$1,300,000 which, he said, "We are earmarking to try to put more emphasis on this particular problem of schizophrenia. It is the largest problem in the mental illness field, *and we have earmarked funds for the first time for work just in that field.*" (Our italics.)

This is an historic 'first' in the annals of American psychiatry, Dr. Dean reports, and a foundation incorporated as Research in Schizophrenia Endowment (RISE) has been established to enable the public to participate in this important work as well. Its founders are: Dr. Nathan S. Kline, Herbert Spiegel, Stanley R. Dean, Mr. and Mrs. Godfrey S. Rockefeller, Congressman Albert P. Morano, and Judge Joseph P. Zone.

Its purpose is to focus attention upon schizophrenia, to make the public more familiar with it, and to solicit public funds for research into its causes and cure. Further information may be obtained from Dr. Stanley R. Dean, 122 Forest St., Stamford, Conn.

SMITH, KLINE & FRENCH FOUNDATION AWARDS.—The American Psychiatric Association has received a \$100,000 grant from this Philadelphia pharmaceutical house for the continuance of the Foundation Fellowships in psychiatry through 1960.

These Fellowships were established in 1955 with a 3-year \$90,000 grant principally supported by contributions from the S.K.F. Laboratories. The program is administered by a committee of the A.P.A. More than 150 physicians and medical students have received assistance through these Foundation Fellowship awards.

Applications for consideration in May and October must be received by the Fellowship committee by April 1 and September 15. Information may be obtained from the Committee, Box 7929, Philadelphia, Pa.

The S.K.F. Foundation has also authorized a grant of \$10,000 to the Academy of Religion and Mental Health to provide Fellowships for theological students and clergymen who wish to become chaplains in mental hospitals.

THE PUBLIC HEALTH NURSE.—The importance of psychiatry in nursing education is discussed with increasing frequency in the nursing journals. The March issue of *Nursing Outlook* (Mildred Gaynor, Editor, 2 Park Ave., New York 16, N. Y.) contains an instructive article by Dr. Paul Lemkau on follow-up services for psychiatric patients. Dr. Lemkau particularly emphasizes the contribution of the public health nurse in this regard and finds that psychiatrists are not sufficiently acquainted with the valuable co-operation that the properly trained public health nurse is able to give.

EXPANDED RESEARCH PROGRAM IN NEUROPHYSIOLOGY, STANFORD MEDICAL SCHOOL.—A gift of \$25,000 from the Zellerbach family of San Francisco will help finance an expanding program of research in neurophysiology at Stanford Medical School, California.

The program, under the direction of Prof. Ronald Grant of the physiology department, is aimed at learning more about function of the "old" or brain-stem portions of the brain. The principal research associate in the project is Dr. Milton Rose, psychiatrist and physiologist.

NATIONAL COUNCIL ON FAMILY RELATIONS.—The annual meeting of the NCFR is to take place in Eugene, Ore., August 20-23, 1958. Topics for the general sessions include: Today's Family in 1978; Measurement of Marital Satisfaction; Personal Values, Professional Ideologies, and Family Specialists.

Section meetings in the form of panel and discussion groups will cover such subjects as Education for Marriage and Family Living in High School and Colleges; Counseling; Religion and the Family; and Research.

For further information write: NCFR Annual Conference, Dr. Theodore B. Joannis, Jr., University of Oregon, Eugene, Ore.

DR. BLOOMBERG APPOINTED COMMISSIONER OF MENTAL HEALTH, CONNECTICUT.—Dr. Wilfred Bloomberg, who has been serving the Southern Regional Education Board temporarily as associate director for mental health, has accepted the post of commissioner of mental health for the State of Connecticut.

In his work in Georgia, he was instrumental in establishing a regional program in mental health training and research in the South. This program is now well under way.

The National Institute of Mental Health has made a grant of \$42,000 for 1958-59 to the S.R.E.B. which will make it possible "for any staff member at any state hospital in the South to travel to a hospital in any part of the country to study an unusual treatment method, administrative or training program, to aid him in improving his work."

RESEARCH FELLOWSHIPS, UNIV. OF PA. SCHOOL OF MEDICINE.—The Institute of Neurological Sciences at the Univ. of Pennsylvania is offering fellowships to Ph.D. candidates and postgraduate investigators (Ph.D., M.D.) who wish to pursue an academic career in the field of psychiatry. Stipends will be arranged according to need and qualifications.

For further information write: Dr. Louis B. Flexner, Institute of Neurological Sciences, School of Medicine, Univ. of Pennsylvania, Philadelphia 4, Pa.

BROOKLYN PSYCHIATRIC SOCIETY.—The newly elected officers of the Brooklyn Psychiatric Society for 1958-59 are as follows: president, David Engelhardt, M.D., vice-president, Sidney Green, M.D.; secretary-treasurer, Abbott Lippman, M.D.

ARMY SOCIAL WORK.—The Department of the Army, Washington, D. C., has issued a 62-page Technical Manual (No. 8-241) which is a comprehensive guide to social work in the army setting. It deals with the functions, techniques, organization and administration of social work in relationship to the Army Medical Service, and describes those characteristics of the Army as a social institution which have specific influence on social work practice and goals.

N. J. NEURO-PSYCHIATRIC INSTITUTE.—Richard P. Swigart, Executive Director, National Association of Mental Health, was the principal speaker at the annual Service Award program held recently at the N. J. Neuro-Psychiatric Institute, Princeton, N. J., Mr. Swigart was formerly with the American Red Cross from 1936 until 1955; he specializes in social service administrative and community organization.

His talk was titled "Beyond the Hospital, The Mental Health Challenge" and he outlined the responsibilities of the community and the individual to the person returned to the community from a mental hospital. He gave a brief, but specific statement of the plans of the Association on a local level for carrying out their program.

RESIDENCY TRAINEESHIPS IN PSYCHIATRY, PENNSYLVANIA.—The Institute of the Pennsylvania Hospital has established special 4 to 5 year residency fellowships designed to offer a broad and integrated training in clinical psychiatry, with emphasis on research training.

Applications from graduates of A.M.A. approved medical schools are invited. For information write the Director of Research, The Institute of the Pennsylvania Hospital, Philadelphia 39, Pa.

CONGRESS OF PSYCHIATRISTS AND NEUROLOGISTS OF FRENCH SPEAKING COUNTRIES.—Dr. Paul Cossa, the secretary-general, reports that the 56th Congress will be held in Strasbourg, July 21-26, 1958.

Three main subjects will be presented: the Korsakoff mental syndrome; neurological complications of visceral cancer; and sex crimes in rural communities.

AMERICAN BOARD OF PSYCHIATRY AND NEUROLOGY, INC.—Dr. David A. Boyd, Jr., secretary-treasurer of the Board announces the following examinations scheduled by the American Board of Psychiatry and Neurology, Inc.: New York, N. Y.—December 15 and 16, 1958. New Orleans, La.—March 16 and 17, 1958.

REPORT ON CONSULTANT MENTAL HEALTH SERVICES, NEW YORK.—The Community Council of Greater New York has issued a 181-page report entitled *Mental Health Consultant and Educational Services in New York City*. The survey covers both public and voluntary organizations in the community, with detailed descriptions of type of services available, personnel used, number of hours devoted to these services and costs of personnel.

A copy of this report may be obtained from Community Council of Greater New York, 44 East 23rd St., New York 10, N. Y.

EASTERN PSYCHIATRIC RESEARCH ASSOCIATION.—The 14th scientific meeting of the

Eastern Psychiatric Research Association will take place Thursday, June 5, 1958, in the New York University Medical School at 8:00 p.m.

Papers to be presented: The Suicidal Risk in the Municipal General Hospital, by Drs. Jacob H. Friedman and Remo Cacellieri; and Psychomotor Paroxysms of Non-Epileptic Origin, by Dr. Eugene Revitch.

There will also be an open discussion on the question "Is Marsilid a Dangerous Drug?"

AMERICAN NEUROLOGICAL ASSOCIATION.—The 83rd annual meeting of the American Neurological Association will be held at the Claridge Hotel, Atlantic City, N. J., June 16-18, 1958, under the presidency of Dr. Israel S. Wechsler.

For further information write the Secretary, Dr. Charles Rupp, 133 South 36th St., Philadelphia 4, Pa.

DR. EUGENE S. TURRELL APPOINTED MEDICAL DIRECTOR OF MILWAUKEE SANITARIUM.—Dr. Eugene S. Turrell, an associate professor of psychiatry at the Univ. of Colorado School of Medicine, has been appointed medical director of the Milwaukee Sanitarium Foundation and professor of psychiatry at Marquette University School of Medicine. The announcement has been made jointly by Mrs. Sophie Y. Schroeder, president of the Milwaukee Sanitarium Foundation, and Dr. John S. Hirschboeck, dean of the Medical School. Dr. Turrell will assume his duties July 1. He will be in direct charge of the medical care program at the sanitarium and he will also organize residency training programs in psychiatry in Milwaukee.

CORRECTION.—Attention has been called to an error in the clinical note, An Acceptable Nonbarbiturate Sedative and Hypnotic for Mental Patients in a State Institution, appearing in the April issue of this Journal, page 932. In the second paragraph the author wishes the dosages to read "0.25 Gm. and 0.5 Gm." and not "0.25 gr. and 0.5 gr." as stated.

BOOK REVIEWS

THE THREE FACES OF EVE. By Corbett H. Thigpen, M.D., and Hervey M. Cleckley, M.D. (New York: McGraw-Hill Book Company, Inc., 1957. \$4.50.)

Those who remember the vigorous and inquisitive mind of Morton Prince can picture the pleasurable excitement with which he would have greeted this book. He would have found Mrs. White no less challenging than was Miss Beauchamp.

It was only through exquisite study of his patient that Prince formulated the concept of multiple personalities, basing it on psychological theories now accepted by all save a few skeptics. Prince, both for exploratory and therapeutic purposes, employed hypnosis extensively. Drs. Thigpen and Cleckley used not only hypnosis but also the electroencephalograph, projective psychological tests, examined the handwriting of the three personalities, and employed various other means of studying neurological and mental phenomena. Their diagnostic studies were long and thorough and unquestionably bear the earmarks of scientific honesty. The clinical phenomena exhibited by Mrs. White were dramatic but the authors' discussion of her symptoms is based on sound and accepted principles of dynamic-genetic psychopathology.

Finally, hypnosis, a visit to a childhood scene where many traumatic incidents had occurred, aided perhaps, after her divorce from a husband with whom she had little in common, by an interest in a congenial young man, revived in a somewhat dramatic way Mrs. White's memory of disturbing childhood experiences. With continued psychotherapy of a form to which probably few psychiatrists would object, a progressive integration, a re-synthesis, of the patient's personality gradually occurred. At the time this book went to press the authors wrote: "At this date our patient appears to be happy, not merely at superficial levels but in a meaningful experiencing of love, and of life." They make no claim, however, that under stress a disassociation may not again occur.

While Dr. Thigpen and Dr. Cleckley offer no new theories as to the formation of multiple personalities they present an excellent summary of what in general is probably now most generally accepted: "... banished and blocked tendencies may, so to speak, coalesce, unite, and organize in their underground region beneath the level of consciousness. Instead of various isolated or fragmentary impulses seeking indirect outlet and distorted expression through something like compulsive handwashing or temporary hysterical blindness, they may accumulate in such quantity and eventually join in such integration as to become the nuclear potential of another personality within themselves. With recruitment continuing and organization progressing, the dormant and concealed forces may become strong enough to challenge the conscious person-

ality and, if successful in this conflict, replace it in command. When this occurs we are dealing with the manifestations of what is said to be *another* and *different* personality. Having gained access to the mechanisms of perception and control of the complex means of human expression and function hitherto beyond its reach, the new entity employs them for its own purposes at the behest of its own tastes and intentions." The authors consider it likely that in such cases many adverse influences in childhood or early life contribute to a serious conflict and work against a healthy development of sound integration.

Almost never does one find meticulously observed clinical phenomena described with such literary skill as in *The Three Faces of Eve*. Sometimes one feels that there is an over-use of adjectives yet without them the nuances of feeling experienced by a deeply troubled person could scarcely have been pictured so vividly.

The literary style of *The Three Faces of Eve* is entirely dignified and it deals with the patient with respect, sympathy and understanding. A therapist's relation with his patient is, however, so personal and confidential that the psychiatrist would regret were this essentially conservative book to stimulate a morbid and sensational curiosity rather than to promote an understanding of mental illness. Probably we should think of disassociation as ranging in a continuum from the alterations of mood to which we are all subject through certain amnesias, various degrees of somnambulism to two or more distinct personalities struggling for the control of a single physical body.

In the final chapter of the book the authors warn against unjustified speculations as a basis for explaining mental disorders. While it must be conceded that some psychiatrists make extreme and unreasonable assumptions the authors cite most extravagant interpretations of dreams for the sole purpose, apparently, of ridiculing a school of psychiatry that has in many respects made extremely valuable contributions to our knowledge of the mind and its methods of operation. Their comments would be quite in order in a polemical discussion but are a bit surprising in this extremely interesting and important clinical contribution.

ARTHUR P. NOYES, M.D.,
Norristown, Pa.

CULTURE AND EXPERIENCE. By A. Irving Hallowell. (Philadelphia: University of Pennsylvania Press, 1955. pp. 434. \$8.50.)

The time is past when one approached the therapeutic and research tasks of psychiatry with simple faith that man is everywhere the same. Yet few scholars have documented the difference in a single culture so well as Professor Hallowell in his life-

long study of Northeastern Indians, the Ojibwa. This book devotes two sections, Parts II and III or almost two-thirds, to these cultural groups. Parts I and IV, cradling this central labor of love, are constructed from solid generalizing studies in anthropology and psychology where the author made contributions which earned him Presidency of the American Anthropological Association in 1949 and numerous honors such as Medalist of the Wenner-Gren Foundation for Anthropological Research. Here Hallowell has provided his own *Festschrift* consisting of 15 essays culled from his 1921-1955 bibliography, given in the volume, plus 5 new articles on Rorschach, the Ojibwa, cultural factors in spatial orientation and in psychological dimensions of cultural change. For one whose activities have included the Anthropology Department, Psychiatry in the Medical School and field studies over the years, the balance of theory, method, research and practical application is maintained throughout. Pioneering in the extensive use of Rorschach and TAT in field work, using psychological concepts deftly to analyze his data, Hallowell notes a *Homo sapiens* cannot be studied adequately, much less understood, without anthropological techniques. In his own account of the distinctive quality of human experience, "a human level of existence implies much more than existence conceived in purely organic terms."

This additional focus of experience is found in wide variations in human sociocultural modes of life as these are painstakingly studied, or may be investigated, by combinations of anthropological and psychological techniques. Obviously, such methods are exploratory, seek to uncover various levels of human adjustment, and do not end up with any stereotyped vignettes of the "psychology," or personality on the one hand, or the cultural configurations on the other. Neither does Hallowell shrink from defining *ranges* of conduct or experience in their cultural dimensions and psychological effects. The Ojibwa, for example, are accustomed to spatial and temporal orientations quite at variance with ours, and to values for which we have no exact counterparts. Despite rumors now prevalent that the Windigo psychosis of several Canadian tribes is nothing unusual, we can not find its exact counterpart as a mental illness elsewhere in the world after some diligent search. For those who feel simple organicism, with a dash of psychological sophistication, is enough to understand their fellowman, this book is a salubrious antidote even if limited to lifelong study of one exotic group. Unfortunately, there is no Index, but 62 pages of notes give a commentary, based on wide acquaintance with the literature of American and European psychiatry, psychology and anthropology.

A book on cultural experience and its psychological impact on people could also be contrasted to certain fashionable forms of phenomenology. While certain emphases on psychological experiences "here and now" appear to have benefited by Occam's Razor (emphasizing certain aspects of experience which are both real and genuine), Hallowell demonstrates that major premises may be excised

by this logic and cultural frameworks eliminated when Occam's Razor slips. Such wholly psychological subjectivism has a castrated and effete quality no longer capable of fitting "here and now" subjectivism into cultural experience. To complete the metaphor, the result is no fruitful science of human behavior, normal or aberrant, or no explanations of experience as having any really understandable meaning. This is not the nature of the infra-human primate, according to anthropology. The whole discovery of anthropology has been that the element of culturally symbolized experience produces not uniformity, but diversity in human existence. What produces order in the phenomenological chaos is that each person has, of necessity, certain social and interpersonal habitats lived in and experienced not unlike others of his group. It is this cultural experience which in turn "meshes with" subjective tendencies, affecting his psychology in various predictable ways. This third element which produces not uniformity, but group diversities in human existence, in personality and even in mental ills is of course crucial to any psychiatric insight. This is what Professor Hallowell has documented so well for over thirty years that it is no longer a debatable issue. The task ahead, a large one for behavioral sciences, is to document other and less exotic variations in our cultural and psychological existences. It would be folly to suppose that psychiatry, or even those psychiatrists with a fashionable smattering of limited ethnic experiences, can do this alone. The level of Hallowell's generalizations and insights into one cultural milieu, studied over the years, argues against both an effete simplification of the theory of culture—"psychiatry made easy" if you will, and against the more grandiose tendencies—"psychiatry made omniscient."

MARVIN K. OPLER, PH. D.,

Cornell University Medical College,
New York City.

BASIC READINGS ON THE MMPI IN PSYCHOLOGY AND MEDICINE. Edited by *George Schlager Welsh* and *W. Grant Dahlstrom*. (Minneapolis: University of Minnesota Press, 1956, pp. 656. \$8.75.)

This volume presents 66 articles of a highly informative nature along with a bibliography of nearly 700 titles. The first three sections concern themselves with material pertaining to the construction of the MMPI and essential information on theory and contemporary coding procedures. These sections are followed by others devoted to newer methods of scale construction, profile analysis techniques and basic diagnostic patterning results. The final four sections are devoted to the application of the MMPI to problems in psychiatry, medicine, therapy, and personality phenomena.

This is an important contribution to MMPI research literature and should be useful not only to clinicians, research workers and others, but also as a valuable class reference in the field of personality test construction and theory. The excellent papers

presented should leave their mark on the field for a long time to come.

ARTHUR LERNER, PH. D.,
Los Angeles City College.

INDIVIDUAL TRAITS AND MORBIDITY IN A SWEDISH RURAL POPULATION. By *Erik Essen-Möller, M.D.* Acta Psychiatrica et Neurologica Scandinavica Supplementum 100. (Copenhagen: Ejnar Munksgaard, 1956.)

Epidemiologic surveys traditionally have attempted to determine the prevalence or incidence of well-defined diagnostic entities in a population under surveillance. Dr. Essen-Möller and his colleagues, from the University Clinic of Psychiatry at Lund, Sweden, attempt, in this work, to evaluate the personalities of all the inhabitants of a rural area, not restricting themselves to just those exhibiting conspicuous mental disorder.

To diagnose variants of personality, they endeavored to obtain a personal but brief interview with every individual belonging to the population. They succeeded in seeing 2520 or about 99% of the 2550 inhabitants. Structured interviews were conducted with adults focusing on the individual's medical and personal history. Thus a wealth of factual information was collected simultaneously with the observation. No bodily examination was performed. Additional information was afterwards secured from other sources and hospital records were exhaustively scrutinized.

Every member of the adult population was observed for a number of traits during the interviews. These were classified according to a graded scale in 4 lines of variation: 1. the "Validity" variation—cautious, tense, meticulous,—self-confident, calm, expansive; 2. the "Solidity" variation—quick, flexible, subjective,—steady, comprehensive, objective; 3. the "Stability" variation—warm, concrete, heavy,—cool, abstract, clever; 4. intellectual capacity.

These lines of variation proved to be largely independent, and the variants to be grouped, within each of them, approximately according to a Gaussian distribution. Reliability was judged from the consistency between the registration obtained from the 4 parts of the population seen by the 4 investigators, who were all trained in the same school of psychiatry by Professor H. Sjöbring.

Several other traits, occurring more sporadically, were registered without gradations and an attempt was made to demonstrate the existence of any relationships to the foregoing variants. The authors attempt to do the same with traits observed outside of interviews, and with complaints reported by the inhabitants such as alcoholic abuse, disorders of sleep, headaches, etc.

The occurrence of well-defined psychiatric disorders was next studied, including the age distributions. These are compared to the corresponding frequencies found by previous authors. They conclude that "asthenic symptoms of varying types"

dominate the picture while a comparatively modest position is occupied by the major psychiatric ailments.

The data are further analyzed by what the authors term the principle of cumulative presentation which is applied to each age group separately. Each inhabitant is counted only once, notice being taken only of that one of his diagnoses which is considered the more severe. It is up to the reader to decide where to draw the line between "diseased or abnormal" and the "sound part" of the population. The former contains from a small fraction to 60% of the population.

Physical ailments present at the time of investigation or reported from histories were recorded and associations with behavioral characteristics were looked for individually as well as statistically. A statistically significant association was established between the item called "proneness to infections," and the psychiatric diagnosis of "early asthenia." In the case of "rheumatic fever," an association with the same groups of asthenia was found. A conceivable explanation would be a predisposition of asthenics to infections, but, they point out that these types of asthenic personalities may result from some vestigial lesion. They tend to regard these as an example of a personality variation pathologic in origin in contrast to the "natural" variation represented by the 4 dimensions previously referred to. With the "torpid" type of personality, a statistical association with the item "cerebral trauma" was found.

In the final chapter, the material is regrouped according to social and demographic conditions, such as occupation, financial position, domicile, birthplace, marital state, and age at marriage. The authors feel that in most respects the items spread rather evenly with few significant associations. Psychotic reactions were found more frequently in the unmarried while psychoneurotic reactions are more frequent than would be expected in the married. They sum up these findings by focussing on the crucial question, how far the demographic position influences the psychiatric differentiation or how far that position is in itself predetermined by the psychiatric state.

In general, I would characterize the study as one which was carefully designed and well executed. Although none of the individual findings is particularly startling, the overall effect is that of a comprehensive work, but one which suffers from the limitations of any purely descriptive study, little if any consideration being given to dynamic and genetic factors in the production of the personality variants. Some of the terminology is unfamiliar to one trained in psychiatry in the United States. There is no question that, to those interested in this highly specialized area of social psychiatric research, this work is a valuable contribution and represents the authors' efforts to progress beyond doing merely a "morbidity" survey.

MELVIN B. GOODMAN, M.D.,
Philadelphia General Hospital.

PERSONNEL MANAGEMENT: PRINCIPLES AND PRACTICE. By C. H. Northcott, Ph. D. (New York: Philosophical Library, 1956, pp. 428. \$10.00.)

The interest in this book for the American or Canadian practitioner of industrial relations and personnel management is in the opportunity it affords to learn something of the British point of view and practices in this field.

The book is organized into two parts—the first giving an exposition of the author's views as to what should be guiding principles, and the second dealing with practice pursuant to these principles.

As to the second part concerning practice we find little that differs from the discussions of such practices to be found in many American textbooks on the subject. It is interesting that, in so far as can be gathered, the British workman seems to be at a disadvantage with his American counterpart in regard to a number of his working conditions. For example, the weekly hours of work seem to average about 44 to 48, where on this continent they would be 40 to 44. The 5-day week, which with us is becoming common, would still seem to be unusual in Britain. In the chapter on "Employee Services" it is interesting to note that the list of services discussed is very similar to those commonly provided in American industry. There is no suggestion that the provision of these services and the effort to "influence" the worker, to provide him with various kinds of incentives, to "lead" him, may have reached the point where they are being overdone from the point of view of the best interests of the worker himself. On this side of the Atlantic some thoughtful articles raising this question have recently appeared.

As to principles, Dr. Northcott lays it down that the purpose of industry is "the production of goods and services" and that the making of profits is merely a condition—a "standard measure of the ability of a business to sell its goods and services upon the market." Members of industrial management and personnel people will be a little startled by his statement that "Very few among the management and almost none of the workers consciously aim to make profits." This reviewer finds this difficult to believe of British management and workers, and would be inclined to restate it as to American industry that almost all among the management consciously aim to make profits and that the workers are strongly influenced by profits in the intensity of their efforts for increased wages during contract negotiations.

Perhaps the most interesting part of Dr. Northcott's book is his argument for a greater measure of democracy in industry coupled with his insistence on more co-operation and consultation between management and workers. As to joint consultation, many American industries have gone a long way in this direction with the result of much better co-operation. As to democracy in industry it is not too clear how far the author would like to go. His discussion of this subject would lead one to believe that industry should be almost completely

democratic involving the principle of government with the full consent of the governed and full rights of appeal. This reviewer's experience leads him to believe we can go further than we have towards democracy in industry and he has seen as one example of its possibilities and success the working out jointly between management and the union of disciplinary codes with the administration of discipline frequently carried out by the union itself. But there are differences between an industry and a political state which raise questions as to how far it is possible or advisable to go in the direction of complete democracy in industry.

H. B. SPAULDING,
London, Ontario.

THE PRACTICE OF PSYCHIATRY IN GENERAL HOSPITALS. By A. E. Bennett, M. D., E. A. Hargrove, M. D. and Bernice Engle. (Berkeley: University of California Press, 1956, pp. 176, \$4.00.)

This book of 176 pages might well be called an encyclopedia of general hospital psychiatry. Dr. Bennett and his associates, through their long experience, not only in pioneering psychiatric units in general hospitals but also in the long-range use of such facilities are able to give authoritative information. With the modern developments in psychiatry there can be no doubt that the kind of psychiatry discussed in this book is going to be more and more a part of the American hospital picture. There is a very helpful description of the functions of the various team members involving major staff. In addition, descriptive trends in programs for physicians and nurses are fundamental in the operation of any such unit. Every general hospital administrator in this country should read this book in order to be more familiar with the nature of things to come and how psychiatry in a general hospital can make all hospital care more effective. This book would make good reading for all residents in psychiatry who will be meeting more opportunities in general hospitals.

The troublesome medical-legal aspects are discussed and even such details as consent forms are shown. Modern interest in insurance plans is discussed, showing the ways these things can be worked out. The ability to give patients continuity of treatment is emphasized, including such things as day care plans. Aside from the factual information there is emphasis all the way through this book on the trends and suggestions for meeting future needs which constitute healthy challenges for all.

E. E. LANDIS, M. D.,
Louisville, Ky.

MANAGEMENT OF MENSTRUAL DISORDERS. By C. Frederic Fluhmann. (Philadelphia: W. B. Saunders Co., 1956.)

Dr. Fluhmann's treatise on the "management of menstrual disorders" is an excellent one. From his opening chapter on the historical review of con-

cepts of menstruation to the final chapter on the clinical usage and commercial preparations of sex hormones, it is a mass of knowledge and valuable knowledge at that. The book is couched in good English and makes excellent reading. The history of menstruation is interesting. The chapter on the menstrual disorders of adolescence fulfills a very useful purpose in this day and age. The menopause is also beautifully handled. The menstrual and ovarian cycles are very scientific for the gynaecologist who is of an especially scientific turn of mind.

Whilst the book is designed primarily for the practising physician, it is very useful for those who wish a further insight into the fantastic realms of menstruation. I found the chapter on anovulatory bleeding very instructive. The chapter on dysmenorrhoea is handled well for it is a most difficult subject to discuss at any time. In these days when so many women think they require hormone therapy for menopausal disturbances the chapter on the clinical usage and commercial preparations of sex hormones is a great aid to the man in general practice, as well as the gynaecologist. I must say I rather liked this book.

H. W. JOHNSTON, M. D., F. R. C. S.,
Toronto, Ont.

BATTLE FOR THE MIND. By William Sargant, M. D.
(Garden City, N. Y.: Doubleday & Co. Inc.,
1957. \$4.50.)

What happens in the nervous system of a blaspheming sinner when under the influence of a rabble-rousing evangelist he gets converted; or when in the hands of a psychoanalyst a youth comes to believe that he hates his father for whom he had supposed that he had a natural filial regard; or when a war prisoner of the Communists is caused to believe that black is white? Likewise what happens in the brain of one of Pavlov's dogs when after certain manipulations the animal behaves in a manner that in a human animal would be considered to indicate a psychiatric disorder? These and many similar questions are dealt with exhaustively in this book.

The author finds that these various reactions are all of a piece. Changes produced in the minds of men, even reversal of customary beliefs, whether by the tactics of priest, politician, psychiatrist, police or inquisitor, are merely variations of the same theme.

Sargant notes in considerable detail from his experience and that of others in World War II the likeness of symptoms in psychic disturbance under great stress to those of artificial neuroses produced in dogs by Pavlov. He urges more thorough acquaintance in the West with Pavlov's work for the light it throws on human neuroses and the associated cerebral transactions.

The author compares experiences under psychoanalysis to those of religious "conversion," indoctrination being concerned with both conditions. As illustrations of a common process he cites the ex-

perience of a psychiatrist who subjected himself to a period of Freudian analysis followed by a like period of Jungian analysis. "Dreams he had under Freudian treatment varied greatly from those he had under Jungian treatment, and he does not even remember the same dreams before or since."

Mind changing has been facilitated by drug-induced "alteration," through "transference" to a psychotherapist, or in the stress of religious "conversion." The author devotes considerable space (54 pp.) to the subject of religious conversion. He seeks to show the relation of the techniques employed by religious agents whether modern evangelists or shamans, in producing sudden conversion to what is known of the physiology of the brain. The question is of course one of suggestibility and the conditions under which and the instrumentalities by which it is produced.

One technique used by the converters, as Fulton Sheen has boldly explained, is to get the prospect when he or she is in an emotional crisis, when the disturbed mental equilibrium renders him or her more susceptible to outside influence. It is interesting that John Wesley went through a conversion experience while in a state of severe mental depression and had sought help from the missionary Peter Bohler. Having previously believed that salvation would be achieved only through works, and believing that his own work as revivalist in Georgia had been a failure, he experienced now a sudden transformation or revelation that faith alone was the *sine qua non*, and his confidence was restored. Thereupon by working up a state of high emotional excitement in his hearers he could secure conversions by implanting the fear of hell-fire in their minds. Jonathan Edwards followed the same procedure.

Similar hysterical states were observed in the religious snake-handling cult of North Carolina, investigated by the author. Here the "descent of the Holy Ghost" was part of the performance. (There are excellent photographs of religious orgies associated with tom-toms in the jungle and with snake-handling in America.)

Sargant has ransacked history and literature to produce a well documented assortment of mind-changing types, on all of which Pavlov's dogs throw light. Varieties of brain-washing are effected by the implantation in the minds of children of religious, political or prejudiced doctrines of any kind and there are also enough contemporary examples of adult minds so perverted. "Many otherwise sensible people cling to strange and cruel views merely because these have been firmly implanted in their brains at an early age, and they can no more be disabused of them by argument than could the generation that still insisted on the flatness of the earth, though it had been circumnavigated on several occasions . . . and it is not surprising to see how little the methods of conversion or eliciting confessions used by the Spanish Inquisition in the sixteenth and seventeenth centuries differ from those that have been used by Communists behind the Iron Curtain."

There is the suggestion of a paradox in the

ANNUAL INDEX

This periodical is indexed alphabetically under both Subject and Author entries.

In searching for a specific article the Author entry should be consulted if the name of the author is known, since the complete bibliographical reference is to be found only after the author's name. When there are two or more authors for an article the complete entry appears only under the name of the first author. Under the names of each of the joint authors a cross reference is made to the original author entry.

The same applies to book reviews, the complete title of the book being listed under the author's name in the list entitled Book Reviews in the Subject Index.

Titles under the Subject Index are often inverted or shortened, and when there are two or more authors, the name of only the first is shown. For the complete author reference, the Author Index should be consulted. The Subject Index covers original articles, biographical and historical material, book reviews, obituaries, and editorial comments.

R indicates a book review; the title of the book is printed in italics, and is followed by the author's name in the Subject Index. Complete book titles are listed under Book Reviews in the Subject Index. Ed indicates an editorial comment; H.N. a historical note; C.N. a clinical note; C.R. a case report; and P.C.R. a preliminary clinical report. Memorial notices appear under Obituaries.

SUBJECT INDEX

A

Addiction:

Drug Addiction in British Columbia (R.); George Stevenson, ed., 572, Dec. '57. Narcotic Bondage; Sandor Rado, 165, Aug. '57.

Activity Therapy Program: Differential Effects of Factors in an: David Levine, 532, Dec. '57.

Administrative Psychiatry:

Administrative Psychiatry (Annual Review of Progress, 1957); J. Martin Myers, 645, Jan. '59.

Administrative Psychiatry: A New Field—Challenging and Rewarding; William B. Terhune, 64, July '57.

A Method for Accelerating Discharge From State Hospitals (A.N.); Frederick B. Charatan, 939, Apr. '58.

A Study of the Transfer of Long-Hospitalized Patients to a Convalescent Service; Frederick Phillips, 344, Oct. '57.

The Unlocking of Wards in Mental Hospitals; L. C. Hurst, 306, Oct. '57.

Adolescent Disorders, Prognosis in; James F. Masterson, Jr., 1097, June '58.

Age: See Geriatrics.

Agranulocytosis: See Ataraxics, Side Effects.

Alcoholism:

Alcoholism and Geriatrics (Review of Psychiatric Progress, 1957); Karl M. Bowman, 621, Jan. '58.

Breathing Deficit, Allergy, and Alcoholism; Norman G. Hawkins, 707, Feb. '58.

A Comparison of Phenaglycodol (Ultrane) Meperbromate and a Placebo in Abstinent Alcoholics (C.N.); Jackson A. Smith, 364, Oct. '57.

The Effect of Cetadial on Delirium Tremens, Alcoholic Hallucinoses and Alcohol Withdrawal (C.N.); D. Wexler, 935, Apr. '58.

Allergy: Breathing Deficit and Alcoholism; Norman G. Hawkins, 707, Feb. '58.

American Board of Psychiatry and Neurology, Inc., 851, Mar. '58.

American Literature and the Dream (R.); Frederick I. Carpenter, 383, Oct. '57.

American Psychiatric Association:

Chicago Meeting (Ed.), 79, July '57.

Proceedings of the American Psychiatric Association, 266, Sept. '57.

Anxiety:

School Phobia: A Study in the Communication of Anxiety; Leon Eisenberg, 712, Feb. '58.

Art, Myth and Symbolism (R.); Charles P. Montford, 1054, May '58.

Aspects de la Psychiatrie Moderne (R.); Jean Delalay, 380, Oct. '57.

Ataraxics:

General Articles:

A Biochemical Evaluation of the Activity of Certain Tranquilizers and their Relationship to Hormonal Function; Malcolm Gordon, 201, Sept. '57.

The Combined Use of a Tranquilizer, Symptomimetic and Vitamins in the Treatment of Elderly Psychotic Patients (C.N.); Lionel H. Blackman, 837, Mar. '58.

The Dual Action of Tranquilizers (C.N.); Joseph A. Barsa, 74, July '57.

The Effect of Tranquilizing Drugs on Enzyme Systems; Jackson A. Smith, 1011, May '58.

Methods Employed and Results Obtained in Psychiatric Studies with New Drugs Acting on the Brain Stem; F. A. Mielke, 134, Aug. '57.

Pharmacological and Biological Psychotherapy; Robert G. Heath, 683, Feb. '58.

Benactyzine (Suavital):

Benactyzine (Suavital) (Corr.); 371, Oct. '57. **Observations Upon the Therapeutic Use of Benactyzine (Suavital (C.N.);** Vernon Kinross-Wright, 73, July '57.

- Cetadial: The Effect of on Delirium Tremens, Alcoholic Hallucinosia, and Alcohol Withdrawal (C.N.); D. Wexler, 935, Apr. '58.
- Chlorpromazine (Thorazine):
 Detection of Chlorpromazine in Body Fluids (C.N.); Daniel J. Cavanaugh, 171, Aug. '57.
- The Effect of Chlorpromazine in Reducing the Relapse Rate in 716 Released Patients: Study 3 (C.N.); Benjamin Pollack, 749, Feb. '58.
- The Effect of Chlorpromazine on the Behavior of Disturbed Children (C.N.); G. Gorham Lane, 937, Apr. '58.
- Follow-Up Study on Thorazine Treated Patients; Else B. Kris, 449, Nov. '57.
- High Dosage Chlorpromazine Therapy After Previous Agranulocytosis (C.R.); M. G. Jacoby, 1040, May '58.
- Management of Severe Chronic Psychotics with Sustained Release Chlorpromazine (C.N.); Henry Staras, 1117, June '58.
- Possible Synergistic Action of Chlorpromazine, Reserpine, and Frenquel (C.N.); J. William Silverberg, 173, Aug. '57.
- A Rapid Urinary Test for Chlorpromazine, Promazine and Pacatal: A Supplementary Report (C.N.); Fred M. Forrest, 931, Apr. '58.
- Simplifying Chlorpromazine Maintenance Therapy (C.N.); Else B. Kris, 836, Mar. '58.
- Therapeutic and Toxic Effects of Chlorpromazine Among 3,014 Hospitalized Cases; Reuben Cares, 318, Oct. '57.
- Two-Year Fate Study of Thorazine-Treated Patients, Paul E. Feldman, 237, Sept. '57.
- Two-Year Follow-Up Study of the Relationship of Chlorpromazine and the Incidence of Convulsions in 50 Post Lobotomy Patients (C.N.); A. E. Paganini, 839, Mar. '58.
- Use of Chlorpromazine Combined with Prochlorperazine (C.N.); Joseph Barsa, 1112, June '58.
- Iproniazid (Marsilid):
 Clinical Note Concerning Iproniazid (Marsilid) (C.N.); Robert R. Schopbach, 838, Mar. '58.
- A Clinical Trial of Marsilid in Psychotic Depressed Patients (C.N.); Antonio J. De Liz Ferreira, 933, Apr. '58.
- Experiences With Marsilid With Report of One Death (C.N.); Erwin R. Smarr, 1115, June '58.
- Iproniazid (Marsilid): Its Use in Office Treatment of Depression (C.N.); W. G. Scanlon, 1036, May '58.
- Marsilid in Catatonic Schizophrenia (C.R.); Carl Breitner, 941, Apr. '58.
- Marsilid in Depression (C.N.); T. R. Robie, 936, Apr. '58.
- A Preliminary Report on Marsilid (C.N.); Frank J. Ayd, Jr., 459, Nov. '57.
- Mepazine (Pacatal):
 Clinical Evaluation of Pacatal; Paul E. Feldman, 143, Aug. '57.
- Mepazine (Pacatal)—Further Report (C.N.); Norbert Bruckman, 262, Sept. '57.
- Treatment of Psychoses with a Combination of Pacatal and Thorazine (C.N.); Manfred Fraun, 460, Nov. '57.
- Meprobamates (Miltown, Equanil):
 A Controlled Study of the Habit Forming Propensities of Meproamate (C.N.); John A. Ewing, 835, Mar. '58.
- Meproamate: A Clinical Study; Abraham Gardner, 524, Dec. '57.
- Use of Miltown (Meproamate) with Psychotic Patients; Veronica M. Pennington, 257, Sept. '57.
- Methyl-Phenidylacetate hydrochloride (Ritalin): The Use of Ritalin Intravenously as a Diagnostic Adjuvant in Psychiatry (P.R.); Herbert Freed, 944, Apr. '58.
- Orphenadrine in the Treatment of Depression (C.N.); Jonas B. Robitscher, 1113, June '58.
- Promazine (Sparine):
 Clinical Impressions of the Response to Promazine Therapy (C.N.); Ludwig Fink, 1031, May '58.
- Perphenazine (Trilafon):
 A Clinical Appraisal of Trilafon (C.N.); Frank J. Ayd, Jr., 554, Dec. '57.
- An Interesting Reaction to a Tranquilizer: Tonic Seizures with Perphenazine (Trilafon) (C.N.); Jay Shanon, 556, Dec. '57.
- Perphenazine—A Drug Modifying Consciousness (C.N.); N. L. Mason-Browne, 173, Aug. '57.
- Trilafon Treatment in Psychotics (C.N.); I. I. Weiss, 1118, June '58.
- Promethazine (Phenergan):
 Treatment of Parkinsonism: Preliminary Report on Use of Promethazine in 12 Cases; Eliere J. Tolan, 518, Dec. '57.
- Rauwolfia Alkaloids:
 The Evaluation of the Effects of Derivatives of Rauwolfia in the Treatment of Schizophrenia; William Malamud, 193, Sept. '57.
- The Place of Reserpine in the Treatment of the Chronic Psychotic Patient; Charles P. Gore, 333, Oct. '57.
- Thiopropazate (Dartal):
 Dartal: A Clinical Appraisal (C.N.); Frank P. Mathews, 1034, May '58.
- Trifluopromazine and Trifluoperazine: Two New Tranquilizers (C.N.); L. H. Rudy, 747, Feb. '58.
- Triiodo-Thyronine, Treatment of Psychiatric Disorders with (C.N.); Frederic F. Flach, 841, Mar. '58.
- Trinuride H: A New Antiepileptic Drug (C.N.); Stephen Krauss, 748, Feb. '58.
- Vesprin and Mopazine: Two New Phenotropic Substances (C.N.); H. Azima, 747, Feb. '58.
- Side Effects:
 Agranulocytosis During Treatment with Methylpromazine (C.R.); Paul E. Feldman, 464, Nov. '57.

- A Case of Agranulocytosis Following "Sparine" Administration (C.R.); Melvin J. Reinhart, 462, Nov. '57.
- "Paradoxical" Effect of Chlorpromazine in a Case of Periodic Catatonia (C.R.); Walter Kruse, 463, Nov. '57.
- Severe Angioneurotic Edema During Chlorpromazine Therapy (C.R.); Frederick R. Hine, 942, Apr. '58.
- Fatalities:**
- Drug Fatalities (Corr.); 371, Oct. '57.
- Fatal Agranulocytosis Due to Trifluorpromazine Hydrochloride (C.R.); Frank J. Ayd, Jr., 940, Apr. '58.
- Unexpected Asphyxial Death and Tranquilizing Drugs (C.N.); Leo E. Hollister, 366, Oct. '57.
- Atypische Psychosen* (R.); Bernard Pauleikhoff, 479, Nov. '57.
- Das Autogen Training* (R.); J. H. Schultz, 95, July '57.
- B
- Battle for the Mind* (R.); William Sargent, 1132, June '58.
- Biochemistry:**
- A Biochemical Evaluation of the Activity of Certain Tranquilizers and Their Relationship to Hormonal Function; M. Gordon, 201, Sept. '57. *Biochemical Individuality* (R.); Roger J. Williams, 1054, May '58.
- A Bio-Psychological Approach to Somatic Treatments in Psychiatry; Gordon T. Heistad, 540, Dec. '57.
- Cerebrospinal Fluid Neuraminic Acid Deficiency in Schizophrenia (C.N.); Samuel Bogoch, 172, Aug. '57.
- Fractionation and Quantitative Analysis of Cerebrospinal Fluid Constituents with Reference to Neuropsychiatric Disorders (C.N.); Samuel Bogoch, 1028, May '58.
- Book Reviews:**
- Acta Neurochirurgica Supplementum III: Röntgendiagnostische Probleme bei Intra-Kraniellen Geschwülsten und Electroencephalographie und Corticographie bei Cerebraler Krampfeiden*, 858, Mar. '58.
- Ajuriaguerra, J. de: See Hecaen, H., jt. auth.
- American Medical Association: J.A.M.A. Clinical Abstracts of Diagnosis and Treatment, 477, Nov. '57.
- Almqvist, Ruben: The Rhythm of Epileptic Attacks and Its Relationship to the Menstrual Cycle, 569, Dec. '57.
- Barrow, Roscoe L.; and Fabing, Howard D.: Epilepsy and the Law, 477, Nov. '57.
- Bell, Marjorie: See Chute, Charles Lionel, jt. auth.
- Bennett, A. E.; Hargrove, E. A.; and Engle, Bernice: Practice of Psychiatry in General Hospitals, 1131, June '58.
- Bois, J. Samuel: Explorations in Awareness, 480, Nov. '57.
- Brezina, Ernst: See Stransky, Erwin, jt. auth.
- Burn, Michael: Mr. Lyward's Answer, 765, Feb. '58.
- Carmichael, Leonard: Basic Psychology, 573, Dec. '57.
- Carpenter, Frederic L.: American Literature and the Dream, 383, Oct. '57.
- Cauldwell, David O.: Men in Female Dress, 95, July '57.
- Chute, Charles Lionel; and Bell, Marjorie: Crime, Courts and Probation, 285, Sept. '57.
- Cleckley, Hervey M.; and Thigpen, Corbett H.: The Three Faces of Eve, 1128, June '58.
- Conn, Howard F.: Current Therapy, 1957, 479, Nov. '57.
- Crowe, Samuel James: Halstead of Hopkins, The Man and His Men, 957, Apr. '58.
- Dahlstrom, W. Grant: See Welsh, George Schlager, jt. auth.
- Delay, Jean: Aspects de la Psychiatrie Moderne, 380, Oct. '57.
- Deutsch, Felix; and Murphy, William F.: The Clinical Interview, Vol. II, 94, July '57.
- Duncan, Garfield G.: A Modern Pilgrim's Progress for Diabetics, 570, Dec. '57.
- Elliott, Harold: Medical Aspects of Traffic Accidents, 92, July '57.
- Engle, Bernice: See Bennett, A. E., jt. auth.
- Essen-Möller, Erik: Individual Traits and Morbidity in a Swedish Rural Population, 1130, June '58.
- Fabing, Howard D.: See Barrow, Roscoe L., jt. auth.
- Frampton, M. E.; and Gall, E. D.: Special Education for the Exceptional Child, Vol. 3, 570, Dec. '57.
- Frank, Lawrence K., et al.: Psychotherapy and Counseling, 569, Dec. '57.
- Frosch, John, ed.: Annual Survey of Psychoanalysis, Vol. 3, 956, Apr. '58.
- Funkenstein, Daniel H.; and Wilkie, George H.: Student Mental Health: An Annotated Bibliography, 1936-1955, 572, Dec. '57.
- Gall, E. D.: See Frampton, M. E., jt. ed.
- Gross, Harry; and Jezer, Abraham: Treatment of Heart Disease: A Clinical Physiologic Approach; 955, Apr. '58.
- Hallowell, A. Irving: Culture and Experience, 1128, June '58.
- Hargrove, E. A.: See Bennett, A. E., jt. auth.
- Hécaen, H.; and Ajuriaguerra, J. de: Troubles Mentaux au Cours des Tumeurs Intracranien-nes, 1053, May '58.
- Hire, A. William: See Weinberg, Henry, jt. auth.
- Hoerr, Norman L.; and Osol, Arthur: A New Gould Medical Dictionary (2nd ed.), 1055, May '58.
- Hudson, Derek: Lewis Carroll, 93, July '57.
- Illing, Hans A.: Group of Contemporary German Book Reviews, 191, Aug. '57.
- Jezer, Abraham: See Gross, Harry, jt. auth.
- Johnson, R. C.: Psychical Research, 475, Nov. '57.
- Kimble, Gregory A.: Principles of Federal Psychology; 1053, May '58.

- King, H. E.: *See* Lewis, N. D. C., jt. ed.
- Klein, D. B.: *Mental Hygiene*, 476, Nov. '57.
- Kline, Nathan S., ed.: *Psychopharmacology*, 956, Apr. '58.
- Koeppen, S.: and Panse, F.: *Klinische Electropathologies*, 91, July '57.
- Kraines, Samuel Henry: *Mental Depressions and Their Treatment*, 1051, May '58.
- Landau, M. E.: *Women of Forty*, 1054, May '58.
- Landis, Carney: *See* Lewis, N.D.C., jt. ed.
- Langen, Deitrich: *Methodische Problem der Klinischen Psychotherapie*, 95, July '57.
- Lewis, N. D. C.; Landis, Carney, and King, H. E.: *Studies in Topectomy*, 572, Dec. '57.
- Licht, Sidney: *Electrodiagnosis and Electromyography*, 96, July '57.
- Liddell, Howard S.: *Emotional Hazards in Animals and Man*, 764, Feb. '58.
- Liebman, Samuel: *Management of Emotional Problems in Medical Practice*, 569, Dec. '57.
- Ling, T. M.: *Mental Health and Human Relations in Industry (R.)*, 285, Sept. '57.
- Loosley, Elizabeth W.: *See* Seeley, John R., jt. auth.
- McCartney, James L.: *Understanding Human Behavior*, 480, Nov. '57.
- MacKay, Roland P., Wortis, S. Bernard, and Sugar, Oscar; *The Year Book of Neurology, Psychiatry, and Neurosurgery 1956-1957*, 478, Nov. '57.
- Malamud, Nathan: *Atlas of Neuropathology*, 478, Nov. '57.
- Manhold, John H.: *Introductory Psychosomatic Dentistry*, 1052, May '58.
- Masselink, Rollo J.: *See* Moore, Joseph Earle, jt. ed.
- McIntosh, Rustin; and Hare, Clarence C.: *Neurology and Psychiatry in Childhood*, 859, Mar. '58.
- Menninger, Karl A.: *Guide to Psychiatric Books*, 95, July '57.
- Merritt, H. Houston: *See* Moore, Joseph Earle, jt. ed.
- Michal-Smith, Harold: *The Mentally Retarded Patient*, 857, Mar. '58.
- Millar, Elaine C. P.: *See* Wolstenholme, G. E. W., jt. ed.
- Montagu, Ashley: *The Direction of Human Development*, 383, Oct. '57.
- Montford, Charles P.: *Art, Myth and Symbolism*, 1054, May '58.
- Moore, Joseph Earle; Merritt, H. Houston; and Masselink, Rollo J.: *The Neurologic and Psychiatric Aspects of the Disorders of Aging*, 955, Apr. '58.
- Moore, Merrill: *A Doctor's Book of the Hours*, 383, Oct. '57.
- Mosse, Eric P.: *The Conquest of Loneliness*, 766, Feb. '58.
- Murphy, Lois Barclay: *Personality in Young Children*, 860, Mar. '58.
- Murphy, William F.: *See* Deutsch, Felix, jt. auth.
- Netter, Frank H.: *Nervous System with a Supplement on the Hypothalamus*, 766, Feb. '58.
- Netter, Frank H.: *Liver, Biliary Tract and Pancreas*, 859, Mar. '58.
- Northcott, C. H.: *Personnel Management: Principles and Practice*, 1131, June '58.
- Noveck, Simon: *Judaism and Psychiatry*, 190, Aug. '57.
- O'Connor, Cecilia M.: *See* Wolstenholme, G. E. W., jt. ed.
- O'Connor, N.; and Tizard, J.: *Social Problem of Mental Deficiency*, 384, Oct. '57.
- Opler, Marvin K.: *Culture, Psychiatry and Human Values*, 957, Apr. '58.
- Osol, Arthur: *See* Hoerr, Norman L.: jt. ed.
- Panse, F.: *See* Koeppen, S., jt. auth.
- Pauleikhoff, Bernard: *Atypische Psychosen*, 479, Nov. '57.
- River, J. Paul de: *The Sexual Criminal*, 764, Feb. '58.
- Rodeman, Charlotte R.: *A Guide for Psychiatric Aides*, 1055, May '58.
- Rolin, Jean: *Police Drugs*, 1052, May '58.
- Sadove, Max; and Cross, James H.: *The Recovery Room*, 862, Mar. '58.
- Sargant, William: *Battle for the Mind*, 1132, June '58.
- Schneider, Kurt: *Die Beurteilung der Zurechnungsfähigkeit*, 380, Oct. '57.
- Schultz, J. H.: *Das Autogen Training*, 95, July '57.
- Sechehayé, Marguerite: *A New Psychotherapy in Schizophrenia*, 1051, May '58.
- Seeley, John R.; Sim, R. Alexander; and Lossley, Elizabeth W.: *Crestwood Heights*, 190, Aug. '57.
- Sim, R. Alexander: *See* Seeley, John R.; jt. auth.
- Slavson, S. R., ed.: *The Fields of Group Psychotherapy*, 861, Mar. '58.
- Small, Leonard: *Rorschach Location and Scoring Manual*, 96, July '57.
- Spinoza, Baruch: *How to Improve Your Mind*, 190, Aug. '57.
- Stallworthy, K. R.: *The Facts of Mental Health and Illness*, 857, Mar. '58.
- Stallworthy, K. R.: *Manual of Psychiatry*, 91, July '57.
- Steiner, Franz: *Taboo*, 479, Nov. '57.
- Stevenson, George, ed.: *Drug Addiction in British Columbia*, 572, Dec. '57.
- Stopes, Marie: *Sleep*, 90, July '57.
- Stransky, Erwin; and Brexina, Ernst: *Psychische Hygiene*, 180, Aug. '57.
- Streng, Alice: *Hearing Therapy for Children*, 382, Oct. '57.
- Sugar, Oscar: *See* Mackay, Roland P., jt. auth.
- Thigpen, Corbett H.: *See* Cleckley H., jt. auth.
- Tizard, J.: *See* O'Connor, N., jt. auth.
- Wallis, Hugh R. E.: *Masked Epilepsy*, 765, Feb. '58.
- Weinberg, Henry; and Hire, A. William: *Case Book in Abnormal Psychology*, 1056, May '58.

- Welsh, George Schlager; and Dahlstrom, W. Grant: Basic Readings on the MMPI in Psychology and Medicine, 1129, June '58.
- Wertham, Fredric: *The Circle of Guilt*, 381, Oct. '57.
- Wilkie, George H.: See Funkenstein, Daniel, jt. auth.
- Williams, Roger J.: Biochemical Individuality, 1054, May '58.
- Wolstenholme, G. E. W.; and Millar, Elaine, C. P.: Ageing in Transient Tissues, 1055, May '58.
- Wolstenholme, G. E. W.; and O'Connor, Cecilia M.; eds.: Internal Secretions of the Pancreas, 861, Mar. '58.
- Wortis, Joseph: Fragments of an Analysis with Freud, 92, July '57.
- Wortis, S. Bernard; See Mackay, Roland P., jt. auth.
- Braceland, Francis J.: President—1956-57: A Biographical Sketch; Howard P. Rome, 10, July '57.
- British Columbia, Drug Addiction in* (R.); George Stevenson, ed., 572, Dec. '57.
- Bromide Intoxication and Quantitative Determination in Serum; Sidney J. Tillim, 232, Sept. '57.
- C
- Cancer, Psychiatric Implications in Survival of (Corr.); 1044, May '58.
- Cardiology: *Treatment of Heart Disease: A Clinical Physiologic Approach* (R.); Harry Gross and Abraham Jezer, 955, Apr. '58.
- Carroll, Lewis (R.); Derek Hudson, 93, July '57.
- Chemotherapy:
- Chemotherapeutic Trials in Psychosis III: 2-Brom-D-Lysergic Acid Diethylamide (BOL 148) (C.N.); William J. Turner, 751, Feb. '58.
- Electroencephalographic Change in Chronic Schizophrenics Under Chemotherapy (P.R.); Max A. Bruck, 945, Apr. '58.
- Chemogenic Symptoms:
- A Study of the Effects of L.S.D.: Physiologic and Psychological Changes and their Interrelations; Alberto Di Mascio, 309, Oct. '57.
- Chemical Concepts of Psychosis (Ed.), 468, Nov. '57.
- Child Psychiatry:
- Behavior Symptoms in Children and Degree of Sickness; John C. Glidewell, 47, July '57.
- The Effect of Chlorpromazine on the Behavior of Disturbed Children (C.N.); G. Gorham Lane, 937, Apr. '58.
- Further Examination of Diagnostic Criteria in Schizophrenic Illness and Psychoses of Infancy and Childhood; J. Louise Despert, 784, Mar. '58.
- Is the Human Personality More Plastic in Infancy and Childhood?; Ian Stevenson, 152, Aug. '57.
- Neurology and Psychiatry in Childhood* (R.); Rustin McIntosh and Clarence C. Hare, eds., 859, Mar. '58.
- Personality in Young Children* (R.); Lois Barclay Murphy, 860, Mar. '58.
- The Relation of Childhood Behavior Problems to Adult Psychiatric Status: A 30-Year Follow-Up Study of 150 Subjects; Patricia O'Neal, 961, May '58.
- School Phobia: A Study in the Communication of Anxiety; Leon Eisenberg, 712, Feb. '58.
- Chronic Psychoses Following Epilepsy; J. E. A. Bartlet, 338, Oct. '57.
- The Clinical Interview Vol. 2* (R.); Felix Deutsch and William F. Murphy, 94, July '57.
- Communication:
- Information Values (Ed.); 375, Oct. '57.
- The Mental Health Book Review Index: An Answer to Dr. Kahn's Query (Corr.); 756, Feb. '58.
- Community Mental Health:
- Community Mental Health Research: Findings After Three Years; Margaret C.-L. Gildea, 970, May '58.
- The Social Maladjustment Unit: A Community Wide Approach to the Problem of Delinquent Behavior; Nathan Blackman, 536, Dec. '57.
- Toward a Definition of the Therapeutic Community; Harry A. Wilmer, 824, Mar. '58.
- Conquest of Loneliness* (R.); Eric P. Mosse, 766, Feb. '58.
- Convulsive Disorders:
- Chronic Psychosis Following Epilepsy; J. E. A. Bartlet, 338, Oct. '57.
- Chronic Psychosis Following Epilepsy (Corr.); 845, Mar. '58.
- Epilepsy (Review of Psychiatric Progress, 1957); Elizabeth G. French, 624, Jan. '58.
- Epilepsy and the Law* (R.); Roscoe L. Barrow and Howard D. Fabing, 477, Nov. '57.
- Masked Epilepsy* (R.); Hugh R. E. Wallis, 765, Feb. '58.
- The Rhythm of Epileptic Attacks and Its Relationship to the Menstrual Cycle* (R.); Ruben Almqvist, 569, Dec. '57.
- Trinuride H.: A New Antiepileptic Drug (C.N.); Stephen Krauss, 748, Feb. '58.
- Convulsive Therapy: The Use of Hexafluorodimethyl Ether (Indoklon) as an Inhalant Convulsant (C.N.); Augusto Esquibel, 461, Nov. '57.
- Crestwood Heights (R.); John R. Seecley, R. Alexander Sim, and Elizabeth W. Loosley, 190, Aug. '57.
- Crime:
- Die Beurteilung der Zurechnungsfähigkeit (R.); Kurt Schneider, 380, Oct. '57.
- The Circle of Guilt* (R.); Fredric Wertham, 381, Oct. '57.
- Correction and Retribution in the Criminal Law; Lawrence Friedman, 421, Nov. '57.
- Reply to Dr. Friedman; Richard G. Board, 424, Nov. '57.
- Crime, Courts and Probation* (R.); Charles Lionel Chute and Marjorie Bell, 285, Sept. '57.
- Murder By Adolescents With Obscure Motivation; A. Warren Stearns, 303, Oct. '57.
- Culture and Experience* (R.); A. Irving Hallowell, 1128, June, '58.

D

Delinquency: *See* Juvenile Delinquents

Depression:

Mental Depressions and Their Treatment (R.);

Samuel Henry Kraines, 1051, May '58.

Mental Depression Associated with Hyperadrenocorticism (C.N.); W. E. Olson, 1041, May '58.

Treatment of a Case of Psychotic Depression Complicated by Aortic Homograph Replacement (C.N.); J. Weatherly, 1120, June '58.

Dictionaries: *New Gould Medical Dictionary* (2nd ed.) (R.); Norman L. Hoerr and Arthur Osol, ed., 1055, May '58.

Diet: The Effect of a Special Diet on Hospitalized Schizophrenic Patients (C.N.); Samuel Bogoch, 261, Sept. '57.

Disaster Reaction: Some Psychiatric Notes on the *Andrea Doria* Disaster; Paul Friedman, 426, Nov. '57.

The Direction of Human Development (R.); M. F. Ashley Montagu, 383, Oct. '57.

A Doctor's Book of the Hours (R.); Merrill Moore, 383, Oct. '57.

Drugs and Drug Therapy: *See* Ataraxics.

Dunton, Dr. William Rush, Jr., Honors For; 665, Jan. '58.

Duplication, Double Orientation and Fusion; Max Levin, 162, Aug. '57.

E

Ecology: Studies in Human; Lawrence E. Hinkle, Jr., 212, Sept. '57.

EEG:

Electroencephalographic Changes in Chronic Schizophrenics Under Chemotherapy (P.R.); Max A. Bruck, 945, Apr. '58.

Electroencephalography (Review of Psychiatric Progress, 1957); W. T. Liberson, 593, Jan. '58.

Röntgendiagnostische Probleme bei Intra-Kraniellen Geschwülsten und Electroencephalographie und Corticographie bei Cerebralen Krampfleiden (R.); *Acta Neurochirurgica* III, 858, Mar. '58.

Electromyography:

Electrodiagnosis and Electromyography (R.); Sidney Licht, 96, July '57.

Some Motor Aspects of Schizophrenia: An EMG Study; George B. Whitmore, 882, Apr. '58.

Electronarcosis: Rapid Treatment of the Psychotic Patient Integrating Electronarcosis and Psychoanalytic Psychotherapy; Esther Bogen-Tietz, 68, July '57.

Electropathology: *Klinische Electrophatologies* (R.); S. Koeppen and F. Panse, 91, July '57.

Electroshock Therapy: *See* Shock Therapy.

Emotional Hazards in Animals and Man (R.); Howard S. Liddell, 764, Feb. '58.

Epilepsy: *See* Convulsive Disorders.

Equus et Machina (Ed.); Stanley Cobb, 759, Feb. '58.

Explorations in Awareness (R.); J. Samuel Bois, 480, Nov. '57.

F

Family Relations: The Intrafamilial Environment of Schizophrenic Patients II: Marital Schism and Marital Skew; Theodore Lidz, 241, Sept. '57.

Family Therapy: Toward an Integrative Therapy of the Family; Nathan W. Ackerman, 727, Feb. '58.

Federal Bureau of Investigation: Crime and Punishment (Ed.); 280, Sept. '57.

Fellowship Lecture:

Eugen Bleuler and Present-Day Psychiatry; Gregory Zilboorg, 289, Oct. '57.

Response to Fellowship Lecture by Gregory Zilboorg on Eugen Bleuler; E. E. Krapf, 299, Oct. '57.

Follow-Up Results in Psychiatric Illness; Donald W. Hastings, 1057, June '58.

Forensic Psychiatry: The Physician and Testamentary Capacity; Gene L. Usdin, 249, Sept. '57.

Freud: Fragments of an Analysis With (R.); Joseph Wortis, 92, July '57.

G

General Hospitals, Psychiatry in: Patterns of Patient Movement in General Hospital Psychiatric Wards; Lucy D. Ozarin, 977, May '58.

Genetics: *See* Heredity and Eugenics.

Geriatrics:

Alcoholism and Geriatrics (Review of Psychiatric Progress, 1957); Karl M. Bowman, 621, Jan. '58.

An Evaluation of Functional Psychoses in Old Age; W. S. Williams, 910, Apr. '58.

The Combined Use of a Tranquilizer, Sympathomimetic and Vitamins, in the Treatment of Elderly Psychotic Patients (C.N.); Lionel H. Blackman, 837, Mar. '58.

Growth and Aging; Edward L. Bortz, 114, Aug. '57.

The Neurologic and Psychiatric Aspects of the Disorders of Aging (R.); Joseph Earle Moore, H. Houston Merritt, and Rollo J. Masselink, eds., 955, Apr. '58.

Results of Four Years Active Therapy for Chronic Mental Patients and the Value of an Individual Maintenance Dose of ECT; Gunther E. Wolff, 453, Nov. '57.

The Use of Nucleic Acid in Aged Patients with Memory Impairment (P.R.); D. Ewen Cameron, 943, Apr. '58.

Gerontology: Relationship Between Social Attitudes Toward Aging and the Delinquencies of Youth; Maurice E. Linden, 444, Nov. '57.

Group of Contemporary German Book Reviews; Hans A. Illing, 191, Aug. '57.

A Guide for Psychiatric Aides (R.); Charlotte R. Rodeman, 1055, May '58.

H

Halstead of Hopkins, The Man and His Men (R.); Samuel James Crowe, 957, Apr. '58.

- Health Insurance and Psychiatric Coverage; Henry A. Davidson, 498, Dec. '57.
- Hearing Therapy For Children* (R.); Alice Streng, et al., 382, Oct. '57.
- Heredity and Eugenics:
Heredity and Eugenics (Review of Psychiatric Progress, 1957); Franz J. Kallmann, 586, Jan. '58.
- The Physiologic Basis of the Manic Depressive Illness: A Theory; S. H. Kraines, 206, Sept. '57.
- Historical:
Beck, Theodorice Romeyn (H.N.); Eric T. Carlson, 754, Feb. '58.
- Bleuler, Eugen, and Present-Day Psychiatry (Fellowship Lecture); Gregory Zilboorg, 289, Oct. '57.
- Clarke, C. K., I Remember (H.N.); C. B. Farrar, 368, Oct. '57.
- Halstead of Hopkins, The Man and His Men (R.); Samuel James Crowe, 957, Apr. '58.
- Historical Roots of Psychotherapy; Nolan D. C. Lewis, 795, Mar. '58.
- Smith, Samuel Michel—First Professor of Psychiatry (H. N.); Philip C. Rond, 843, Mar. '58.
- Hypnotherapy for Achalasia of the Esophagus (Cardiospasm) (C.R.); Jerome M. Schneck, 1042, May '58.
- Hysteria, The Hysterical Personality and "Hysterical" Conversion; Paul Chodoff, 734, Feb. '58.
- Hysterical Stigmatization; Joseph E. Lifshutz, 527, Dec. '57.

I

- Idea and Act. (Ed.); 374, Oct. '57.
- Idea and Act. (Corr.); 758, Feb. '58.
- Individual Traits and Morbidity in a Swedish Rural Population* (R.); Erik Essen-Möller, 1130, June '58.
- Industrial Psychiatry:
Industrial Psychiatry (Review of Psychiatric Progress, 1957); Ralph T. Collins, 627, Jan. '58.
- Mental Health and Human Relations in Industry (R.); T. M. Ling, ed., 285, Sept. '57.
- In Memoriam:
Gayle, Robert Finley, Jr.; 767, Feb. '58.
- Gregg, Alan, 287; Sept. '57.
- Johnson, Melvin Maynard; 959, Apr. '58.
- Lowrey, Lawson Gentry, 671, Jan. '58.
- Parsons, Frederick W.; 864, Mar. '58.
- Sandy, William C.; 575, Dec. '57.
- Insulin Coma Treatment:
Insulin Coma in Decline; Harold Bourne, 1013, May '58.
- The Mecholyl Test as a Predictor of Improvement in Insulin Coma Therapy (C.N.); Harry Vanderkamp, 365, Oct. '57.
- International Psychiatry:
American Psychiatry; John C. Whitehorn, 109, Aug. '57.
- An English View of American Psychiatry; Michael Shepherd, 417, Nov. '57.
- Contemporary Psychiatry in Portugal; Henrique J. de Barahona Fernandes, 923, Apr. '58.

- Current Clinical and Research Trends in Soviet Psychiatry; Stanley Lesse, 1018, May '58.
- European and British Psychiatry; T. Ferguson Rodger, 97, Aug. '57.
- International Psychiatry; Iago Galdston, 103, Aug. '57.
- Psychiatry and Higher Education in Finland; Kauko Kaila, 1023, May '58.
- Psychiatry in Post-War Germany; H. Ehrhardt, 414, Nov. '57.
- Second International Congress for Psychiatry (Ed), 467, Nov. '57.

J

- Judaism and Psychiatry* (R.); Simon Noveck, 190, Aug. '57.
- Juvenile Delinquency:
The Circle of Guilt (R.); Fredric Wertham, 381, Oct. '57.
- Control Problems in Group Therapy with Aggressive Adolescent Boys in a Mental Hospital; Belinda Straight, 998, May '58.
- The Defective Delinquent; Peter W. Bowman, 147, Aug. '57.
- Mr. Lyward's Answer* (R.); Michael Burn, 765, Feb. '58.
- Relationship Between Social Attitudes Toward Aging and the Delinquencies of Youth; Maurice E. Linden, 444, Nov. '57.
- The Social Maladjustment Unit: A Community Wide Approach to the Problem of Delinquent Behavior; Nathan Blackman, 536, Dec. '57.

L

- Leucotomy: See Psychosurgery.
- Lobotomy: See Psychosurgery.
- L.S.D.: A Study of the Effects of L.S.D.: Physiologic and Psychological Changes and Their Interrelations; Alberto Di Mascio, 309, Oct. '57.

M

- Manic Depressive Illness: The Physiologic Basis of: A Theory; S. H. Kraines, 206, Sept. '57.
- The Mecholyl Test as a Predictor of Improvement in Insulin Coma Therapy (C.N.); Harry Vanderkamp, 365, Oct. '57.
- Medical Atlas:
Liver, Biliary Tract and Pancreas (R.); Frank H. Netter, 859, Mar. '58.
- Nervous System with a Supplement on the Hypothalamus* (R.); Frank H. Netter, 766, Feb. '58.
- Medicine:
Internal Secretions of the Pancreas (R.); G. E. W. Wolstenholme and Cecilia M. O'Connor, eds., 861, Mar. '58.
- Management of Emotional Problems in Medical Practice* (R.); Samuel Liebman, 560, Dec. '57.
- The Recovery Room* (R.); Max Sadove and James H. Cross, 862, Mar. '58.
- Medico-Legal:
Certain Aspects of Sex Psychopath Laws; Karl M. Bowman, 690, Feb. '58.

- Epilepsy and the Law* (R.); Roscoe L. Barrow and Howard D. Fabing, 477, Nov. '57.
- Mental Deficiency:**
- Child Psychiatry and Mental Deficiency (Review of Psychiatric Progress, 1957); Leo Kanner; 609, Jan. '58.
- The Mentally Retarded Patient* (R.); Harold Michal-Smith, 857, Mar. '58.
- Simulated Retardation (Corr.); 846, Mar. '58.
- Social Problem of Mental Deficiency* (R.); N. O'Connor, 384, Oct. '57.
- Special Education for the Exceptional Child*, Vol. 3, (R.); M. E. Frampton and E. D. Gall, eds., 570, Dec. '57.
- Mental Health:**
- Early Detection and Prevention of Disease* (R.); John P. Hubbard, 857, Mar. '58.
- The Facts of Mental Health and Illness* (R.); K. R. Stallworthy, 857, Mar. '58.
- Mental Health and Human Relations in Industry (R.); T. M. Ling, ed., 285, Sept. '57.
- Mental Health in Education (Review of Psychiatric Progress, 1957); W. Carson Ryan, 626, Jan. '58.
- Mental Hygiene* (R.); D. B. Klein, 476, Nov. '57.
- Mental Hospital:**
- Analysis of 1955-1956 Population Fall in New York State Mental Hospitals in First Year of Large-Scale Use of Tranquilizing Drugs; Henry Brill, 509, Dec. '57.
- Contributions of Social Science to the Administrative Process in the Mental Hospital; Morris S. Schwartz, 493, Dec. '57.
- Observations on the Therapeutic Aspects of Administration in Public Mental Hospitals; Walter E. Barton, 488, Dec. '57.
- Patient "Privileges" in Mental Hospitals; A. H. Tuma, 1104, June '58.
- Mescaline:**
- The Antidotal Action of Sodium Succinate in the Mescaline Psychosis; Ian Stevenson, 328, Oct. '57.
- A Further Note on the Mechanism of the Antidotal Action of Sodium Succinate in the Mescaline Psychosis (C.N.); Ian Stevenson, 1037, May '58.
- Methodology, Fallacies of:**
- The Cart Before the Horse (Ed.); Leo Kanner, 948, Apr. '58.
- Meyer, Adolf: Memorial Plaque Unveiled; 665, Jan. '58.
- Military Psychiatry:**
- Psychiatric Management of Suicide Problems in Military Service; William Offenkrantz, 33, July '57.
- Treatment of Acute Emotional Disorders Under the Dependents' Medical Care Program for the Dependents of Members of the Uniformed Services, 469, Nov. '57.
- A Modern Pilgrim's Progress for Diabetics* (R.); Garfield G. Duncan, 570, Dec. '57.
- N**
- Negro Race: The Effect of Culture Change on the Negro Race in Virginia, as Indicated by a Study of State Hospital Admissions; David C. Wilson, 25, July '57.
- Neurology: Clinical Neurology (Review of Psychiatric Progress, 1957); William H. Timberlake, 615, Jan. '58.
- Neuropathology; Endocrinology and Biochemistry. (Review of Psychiatric Progress, 1957); O. R. Langworthy, 590, Jan. '58.
- A Neurophysiological Test For Psychiatric Diagnosis; Results in 750 Patients; Charles Shagass, 1002, May '58.
- New York Hospitals: Analysis of 1955-1956 Population Fall in New York State Mental Hospitals in First Year of Large-Scale Use of Tranquilizing Drugs; Henry Brill, 509, Dec. '57.
- O**
- Oedipus: Investigation of the Oedipus Phantasy by Hypnosis (R.N.); W. Earl Biddle, 175, Aug. '57.
- Official Reports:**
- Report of the Coordinating Committee on the Community Aspects of Psychiatry, 181, Aug. '57.
- Report of Coordinating Committee on Professional Standards, 182, Aug. '57.
- Report of the Coordinating Committee on the Technical Aspects of Psychiatry, 87, July '57.
- Resolution on Relations of Medicine and Psychology, 761, Feb. '58.
- Treatment of Acute Emotional Disorders Under the Dependents' Medical Care Program for the Dependents of Members of the Uniformed Services, 469, Nov. '57.
- P**
- Paresis: Wagner-Jauregg and the "Priority" of Producing Artificial Fever for Treatment of General Paresis (Ed.); Vincent E. Gonda, 561, Dec. '57.
- Parkinsonism: Treatment of Parkinsonism: Preliminary Report on Use of Promethazine in 12 Cases; Eliere J. Tolan, 518, Dec. '57.
- Perception and Interpersonal Relations; Hadley Cantril, 119, Aug. '57.
- Personality Assessment: A New Symbol Approach to; Theodore C. Kahn, 741, Feb. '58.
- Pharmacotherapy: See Ataraxics and Chemotherapy.
- Phobia: School Phobia: A Study in the Communication of Anxiety; Leon Eisenberg, 712, Feb. '58.
- Photic Stimulation: Experience with in Psychiatric Research; George A. Ulett, 127, Aug. '57.
- Physiological Treatment (Review of Psychiatric Progress, 1957); Joseph Wortis, 603, Jan. '58.
- Poliomyelitis: Neuropsychiatric Aspects of Acute Poliomyelitis; Jimmie C. B. Holland, 54, July '57.
- Presidential Address: Psychiatry and the Science of Man; Francis J. Braceland, 1, July '57.
- Primitive Traits: Upsurge of the Savage (Ed.); 179, Aug. '57.

Prison Psychiatry:

- The Prison Code; Paul R. Miller, 583, Jan. '58.
 Psychiatric Facilities in Prisons and Correctional Institutions in the United States; Warren S. Wille, 481, Dec. '57.

Psychiatric Education:

- Psychiatric Education (Review of Progress, 1957); F. G. Ebaugh, 650, Jan. '58.
 The Role of the Psychiatrist in Teaching Comprehensive Medical Care; Donald C. Greaves, 42, July '57.
 Some Current Economic and Social Problems in Residency Training (Ed.); F. G. Ebaugh, 559, Dec. '57.

Student Mental Health: An Annotated Bibliography, 1936-1955 (R.); Daniel H. Funkenstein and George H. Wilkie, 572, Dec. '57.

Psychiatric Nosology:

- Logical Analysis; John R. Reid, 397, Nov. '57.
 The Problem of Psychiatric Nosology; Thomas S. Szasz, 405, Nov. '57.

Psychiatric Nosology: From Hippocrates to Kraepelin; Ilza Veith, 385, Nov. '57.

The Threat of Clarity; Garrett Hardin, 392, Nov. '57.

Psychiatric Nursing (Review of Progress, 1957); Lavonne M. Frey, 630, Jan. '58.

Psychiatry and the Science of Man (Presidential Address); Francis J. Braceland, 1, July '57.

Psychische Hygiene (R.); Erwin Stansky and Ernst Brexina, 189, Aug. '57.

Psychical Research:

Psychical Research (R.); R. C. Johnson, 475, Nov. '57.

Psychical Research (Corr.); 846, Mar. '58.

Psychoanalysis:

Annual Survey of Psychoanalysis, Vol. 3 (R.); John Frosch, ed., 956, Apr. '58.

Freud and Lay Psychoanalysis (Corr.); 946, Apr. '58.

Freud and Lay Psychoanalysis (Corr.); 557, Dec. '57.

High Cost of Analytic Training (Corr.); 78, July '57.

Rapid Treatment of the Psychotic Patient Integrating Electroneurosis and Psychoanalytic Psychotherapy; Esther Bogen-Tietz, 68, July '57.

Psychology:

Basic Psychology (R.); Leonard Carmichael, 573, Dec. '57.

Basic Readings on the MMPI in Psychology and Medicine (R.); George Schlager Welsh, 1129, June '58.

Case Book in Abnormal Psychology (R.); Henry Weinberg and A. William Hire, 1056, May '58.

Clinical Psychology (Review of Psychiatric Progress, 1957); Frederick Wyatt, 597, Jan. '58.

Principles of General Psychology (R.); Gregory A. Kimble, 1053, May '58.

Psychopharmacology (R.); Nathan S. Kline, ed., 956, Apr. '58.

Psychosomatic:

Introductory Psychosomatic Dentistry (R.); John H. Manhold, 1052, May '58.

Psychophysiological Gastrointestinal Reactions; Vincent Edward Lascara, 457, Nov. '57.

A Psychosomatic Study of Allergic and Emotional Factors in Children with Asthma; Robert T. Long, 890, Apr. '58.

Psychosurgery:

Psychosurgery (Review of Psychiatric Progress, 1957); Walter Freeman, 608, Jan. '58.

Studies in Tryptomy (R.); Nolan D. C. Lewis, Carney Landis, and H. E. King, ed., 572, Dec. '57.

Transorbital Leucotomy in Noninstitutional Cases; Abraham Gardner, 140, Aug. '57.

Two-Year Follow-Up Study of the Relationship of Chlorpromazine and the Incidence of Convulsions in 50 Post Lobotomy Patients (C.N.); A. E. Paganini, 839, Mar. '58.

Psychotherapy:

An Analysis of Therapeutic Artfulness; Walter Bromberg, 719, Feb. '58.

Clinical Psychiatry and Psychotherapy (Review of Psychiatric Progress, 1957); Paul H. Hoch, 599, Jan. '58.

Differential Effects of Factors in an Activity Therapy Program; David Levine, 532, Dec. '57.

The Fields of Group Psychotherapy (R.); S. R. Slavson, ed., 861, Mar. '58.

Group Psychotherapy: Individual and Cultural Dynamics in a Group Process; Marvin K. Opler, 433, Nov. '57.

Historical Roots of Psychotherapy; Nolan D. C. Lewis, 795, Mar. '58.

Methodische Problem der Klinischen Psychotherapie (R.); Deitrich Langen, 95, July '57.

On Some Principles of Therapy; Sydney G. Margolin, 1087, June '58.

Pharmacological and Biological Psychotherapy; Robert G. Heath, 683, Feb. '58.

Psychotherapy and Counseling (R.); Lawrence K. Frank, et al., 569, Dec. '57.

Social Aspects of Psychotherapy; Frederick C. Redlich, 800, Mar. '58.

Some Guiding Concepts in Dynamic Psychotherapy; Oskar Diethelm, 805, Mar. '58.

Treatment of Homosexuality by Individual and Group Psychotherapy; Samuel B. Hadden, 810, Mar. '58.

Psychotomimetics: See Chemotherapy.

Puberty: Homeostasis During; Flanders Dunbar, 673, Feb. '58.

Public Health: Schizophrenia as a Public Health Problem (Corr.); 557, Dec. '57.

R

Race: Psychological Aspects of Prejudice with Special Reference to Desegregation; Harold I. Lief, 816, Mar. '58.

"Reader of a Paper" and the "Listener": Some Heretic Thoughts; (Ed) Hans Unger, 949, Apr. '58.

Reality: Normal Deviations From: Claude C. Bowman, 439, Nov. '57.

Regional Psychiatry:

California Mental Health Services (Ed.); W. Treadway, 376, Oct. '57.

A Note On Psychiatric Developments in the San Francisco Bay Area; Portia Bell Hume, 926, Apr. '58.

Rehabilitation:

Homemaker Service in Psychiatric Rehabilitation; C. Knight Aldrich, 993, May '58.

Rehabilitation and Occupational Therapy (Review of Psychiatric Progress, 1957); Franklin S. DuBois, 632, Jan. '58.

Rehabilitation of the Mentally Ill: Impact of a Project Upon Hospital Structure; Milton Greenblatt, 986, May '58.

Research:

Historical Landmarks in Research on Schizophrenia in United States; W. K. McKnight, 873, Apr. '58.

Multidisciplinary Research in Schizophrenia; William Malamud, 865, Apr. '58.

A Realistic Approach to Training Research Personnel (Ed.); Lauren H. Smith, 849, Mar. '58.

Reviews of the Literature:

Clinical Neurology; William T. Timberlake, 615, Jan. '58.

Administrative Psychiatry; J. Martin Myers, 645, Jan. '58.

Alcoholism and Geriatrics; Karl M. Bowman, 621, Jan. '58.

Child Psychiatry and Mental Deficiency; Leo Kanner, 617, Jan. '58.

Clinical Psychiatry and Psychotherapy; Paul H. Hoch, 599, Jan. '58.

Clinical Psychology; Frederick Wyatt, 597, Jan. '58.

Electroencephalography; W. T. Liberson, 593, Jan. '58.

Epilepsy; Elizabeth G. French, 624, Jan. '58.

Family Care and Outpatient Psychiatry; Walter Barton, 638, Jan. '58.

Forensic Psychiatry; Winfred Overholser, 642, Jan. '58.

Heredity and Eugenics; Franz J. Kallmann, 586, Jan. '58.

Industrial Psychiatry; Ralph T. Collins, 627, Jan. '58.

Mental Health In Education; W. Carson Ryan, 626, Jan. '58.

Military Psychiatry; Joseph S. Skobba, 647, Jan. '58.

Neuropathology, Endocrinology and Biochemistry; Orthello R. Langworthy, 599, Jan. '58.

Physiological Treatment; Joseph Wortis, 603, Jan. '58.

Psychiatric Education; Franklin G. Ebaugh, 650, Jan. '58.

Psychiatric Nursing; Lavonne M. Frey, 630, Jan. '58.

Psychiatric Social Work; Margaret L. Newcomb, 637, Jan. '58.

Psychosurgery; Walter Freeman, 608, Jan. '58.

Rehabilitation and Occupational Therapy; Franklin S. DuBois, 632, Jan. '58.

Rorschach Location and Scoring Manual (R.); Leonard Small, 96, July '57.

S

Schizophrenia:

Cerebrospinal Fluid Neuraminic Acid Deficiency in Schizophrenia (C.N.); Samuel Bogoch, 172, Aug. '57.

A Comparison of Rhythmic and Non-Rhythmic Music in Chronic Schizophrenics (C.N.); 1111, June '58.

A Controlled Study of the Short-Term Differential Treatment of Schizophrenia; Werner Simon, 1077, June '58.

The Effect of a Special Diet on Hospitalized Schizophrenic Patients (C.N.); Samuel Bogoch, 261, Sept. '57.

Effect On Behavior in Humans with the Administration of Taraxcin; Robert G. Heath, 14, July '57.

Electroencephalographic Changes in Chronic Schizophrenics under Chemotherapy (P.R.); Max A. Bruck, 945, Apr. '58.

Eugen Bleuler's Concept of the Group of Schizophrenias at Mid-Century; Fritz A. Freyhan, 769, Mar. '58.

The Evaluation of the Effects of Derivatives of Rauwolfia in the Treatment of Schizophrenia; William Malamud, 193, Sept. '57.

Further Examination of Diagnostic Criteria in Schizophrenic Illness and Psychoses; J. Louise Despert, 784, Mar. '58.

Historical Landmarks in Research on Schizophrenia in the United States; W. K. McKnight, 873, Apr. '58.

The Intrafamilial Environment of Schizophrenic Patients II: Marital Schism and Marital Skew; Theodore Lidz, 241, Sept. '57.

Iproniazid Phosphate in the Treatment of the Chronic Hospitalized Schizophrenic (C.N.); Arthur Hoshino, 1111, June '58.

Marsilid in Catatonic Schizophrenia (C.R.); Carl Breitner, 941, Apr. '58.

The Misuse of the Diagnosis Childhood Schizophrenia; Hilde L. Mosse, 791, Mar. '58.

Multidisciplinary Research in Schizophrenia; William Malamud, 865, Apr. '58.

Multiple Approaches to Treatment in Schizophrenia and Discussion of Indications; Leo Alexander, 577, Jan. '58.

A New Psychotherapy in Schizophrenia (R.); Marguerite Sechehaye, 1051, May '58.

Of Schizophrenia and the Schizophrenic; Vernon Kinross-Wright, 703, Feb. '58.

Pharmacological and Biological Psychotherapy; Robert G. Heath, 683, Feb. '58.

A Point of View as to the Nature of Schizophrenia; Nathan S. Kline, 505, Dec. '57.

Prognostic Value of Perceptual Distortion of Temporal Orientation in Chronic Schizophrenics; John Lanzkron and W. Wolfson, 744, Feb. '58.

Schizophrenia (Corr.); 557, Dec. '57.

Serum Bipoprotein Concentrations in a Schizophrenic Population (C.N.); Edward H. Strisower, 263, Sept. '57.

Sonic Motor Aspect of Schizophrenia: An EMG Study; George B. Whatmore, 882, Apr. '58.

- A Study of Cases of Schizophrenia Treated by "Direct Analysis"; William A. Horwitz, 780, Mar. '58.
- Use of Oral Hypoglycemic Agents in the Treatment of Schizophrenia (C.N.); 1116, June '58.
- Sensory Deprivation: a Review; Philip Solomon, 357, Oct. '57.
- Sex:
- Certain Aspects of Sex Psychopath Laws; Karl M. Bowman, 690, Feb. '58.
- The Sexual Criminal* (R.); J. Paul de River, 764, Feb. '58.
- Shock Therapy:
- Effective Utilization of Electric Convulsive Treatment; Peter F. Regan, 351, Oct. '57.
- Electroshock and Hypothalamic Syndrome (Corr.); 371, Oct. '57.
- Electroshock Technique (C.N.); David R. Hawkins, 1032, May '58.
- Electroshock Therapy (Corr.); 76, July '57.
- Electroshock Therapy (Corr.); 372, Oct. '57.
- Further Experiences with Electroshock Therapy Modified by Anectine" (C.N.); Charles Saltzman, 1033, May '58.
- A New Naso-Pharyngeal Airway for Use with Cerebral Electro-Convulsive Therapy (C.N.); Joseph Epstein, 1030, May '58.
- P M G M. Succinylcholine-Modified Electroshocktherapy Without Barbiturates; David J. Impastato, 698, Feb. '58.
- Results of Four Years Active Therapy for Chronic Mental Patients and the Value of an Individual Maintenance Dose of ECT; Gunther E. Wolff, 453, Nov. '57.
- A Statistical Comparison of Two Methods of ECT (C.N.); Peter D. King, 555, Dec. '57.
- Sleep* (R.); Marie Stopes, 90, July '57.
- Social Psychiatry: *Culture, Psychiatry and Human Values* (R.); Marvin K. Opler, 957, Apr. '58.
- Social Science:
- Contributions of Social Science to the Administrative Process in the Mental Hospital; Morris S. Schwartz, 493, Dec. '57.
- Some Interrelations of Social Factors and Clinical Diagnosis in Attempted Suicide: A Study of 109 Patients; Eli Robins, 221, Sept. '57.
- Sodium Succinate: The Antidotal Action of Sodium Succinate in the Mescaline Psychosis; Ian Stevenson, 328, Oct. '57.
- Somatic Treatment: A Bio-Psychological Approach to Somatic Treatments in Psychiatry; Gordon T. Heistad, 540, Dec. '57.
- Spinoza: *How to Improve Your Mind* (R.); Baruch Spinoza, 190, Aug. '57.
- Stransky, Erwin, *On his Eightieth Birthday* (Ed.); H. Reisner, 466, Nov. '57.
- Students: Characteristics of an Acute Confusional State in College Students; Helen B. Carlson, 900, Apr. '58.
- Suicide:
- Psychiatric Management of Suicide Problems in Military Service; William Offenkrantz, 33, July '57.
- Some Interrelations of Social Factors and Clinical Diagnosis in Attempted Suicide: A Study of 19 Patients; Eli Robins, 221, Sept. '57.
- Symbol: A New Symbol Approach to Personality Assessment; Theodore C. Kahn, 741, Feb. '58.
- T
- Taboo* (R.); Franz Steiner, 479, Nov. '57.
- Taraxein: Behavioral Changes in Nonpsychotic Volunteers Following Administration of Taraxein, the Substance Obtained from Serum of Schizophrenic Patients; Robert G. Heath, 917, Apr. '58.
- Effect on Behavior in Humans with the Administration of Taraxein; Robert G. Heath, 14, July '57.
- Testamentary Capacity: The Physician and Testamentary Capacity; Gene L. Usdin, 247, Sept. '57.
- Testing: The "Double Blind" Method: Its Pitfalls and Fallacies; Werner Tutenr, 921, Apr. '58.
- Textbooks:
- A Guide to Psychiatric Books* (R.); Karl. *Manual of Psychiatry* (R.); K. R. Stallworthy, 91, July '57.
- Three Faces of Eve* (R.); Hervey Cleckley and Corbett H. Thigpen, 1128, June '58.
- Time Experience:
- A Method for Studying the Organization of Time Experience; John S. Kafka, 546, Dec. '57.
- Prognostic Value of Perceptual Distortion of Temporal Orientation in Chronic Schizophrenics; John Lanzkron, 744, Feb. '58.
- Topectomy: See Psychosurgery.
- Traffic Accidents: *Medical Aspects of Traffic Accidents* (R.); Harold Elliott, 92, July '57.
- Tranquilizers: See Ataraxics.
- Transvestism: *Men in Female Dress* (R.); David O. Cauldwell, 95, July '57.
- U
- Studies in Ulcerative Colitis; George J. Mohr, 1067, June '58.
- Understanding Human Behavior* (R.); James L. McCartney, 480, Nov. '57.
- Urinalysis: A Rapid Urinary Test for Chlorpromazine, Promazine and Pacatal: A Supplementary Report (C.N.); Fred M. Forrest, 931, Apr. '58.
- V
- Vasolastine in the Treatment of Arteriosclerosis (C.N.); A. J. Noordsij, 836, Mar. '58.
- Veterans Administration Program Changes (Ed.); S. Spafford Ackerly, 281, Sept. '57.
- W
- Wagner-Jauregg:
- Wagner-Jauregg and the "Priority" of Producing Artificial Fever For Treatment of General Paresis (Ed.); 561, Dec. '57.

Wagner-Jauregg (Corr.); 372, Oct. '57.

A Note on Wagner-Jauregg; Zigmond Lebensohn, 1122, June '58.

Wilde, Oscar (Corr.); 757, Feb. '58.

Wilde, Oscar (Corr.); 176, Aug. '57.

Women of Forty (H.); M. E. Landau, 1054, May '58.

AUTHOR INDEX

A

Ackerly, S. Spafford: Veterans Administration Program Changes (Ed.), 281, Sept. '57.

Ackerman, Nathan W.: Toward an Integrative Therapy of the Family, 727, Feb. '58.

Aldrich, C. Knight: Homemaker Service in Psychiatric Rehabilitation, 993, May '58.

Alexander, Leo; and Moore, Merrill: Multiple Approaches to Treatment in Schizophrenia and Discussion of Indications, 577, Jan. '58.

Angel, Charles: See Heath, Robert G., jt. auth.

Asrican, Edward: See Cares, Reuben, jt. auth.

Ayd, Frank J., Jr.: Fatal Agranulocytosis Due to Trifluoromazine Hydrochloride (C.R.), 940, Apr. '58.

Ayd, Frank J., Jr.: A Clinical Appraisal of Trilafon (C.N.), 554, Dec. '57.

Ayd, Frank J., Jr.: A Preliminary Report on Marsilid (C.N.), 459, Nov. '57.

Azima, H.; Durost H.; and Cahn, C.: Vesprin and Mopazine: Two New Phenotropic Substances (C.N.), 747, Feb. '58.

B

Bandler, Louise: See Long, Robert T., jt. auth.

Barron, S. H.: See Mohr, George J., jt. auth.

Barsa, Joseph A.: The Dual Action of Tranquilizers (C.N.), 74, July '57.

Barsa, Joseph A.: The Use of Chlorpromazine Combined with Prochlorperazine (C.N.), June '58.

Bartlet, J. E. A.: Chronic Psychosis Following Epilepsy, 338, Oct. '57.

Barton, Walter E.: Observations on the Therapeutic Aspects of Administration in Public Mental Hospitals, 488, Dec. '57.

Barton, Walter: See Malamud, William, jt. auth.

Benedict, P.: Correctional Psychiatry (Ed.), June '58.

Biddle, W. Earl: Investigation of the Oedipus Fantasy by Hypnosis (R.N.), 175, Aug. '57.

Blackman, Lionel H.; Glenn, Abraham; and Olinger, Leon: The Combined Use of a Tranquilizer, Sympathomimetic, and Vitamins in the Treatment of Elderly Psychotic Patients (C.N.), 837, Mar. '58.

Blackman, Nathan; Flynn, Thomas T.; Melican, Thomas P.; Napoli, John G.; and Weiss, James M. A.: The Social Maladjustment Unit: A Community Wide Approach to the Problem of Delinquent Behavior, 536, Dec. '57.

Blom, Gaston E.: See Long, Robert T., jt. auth.

Y

Yearbooks:

Current Therapy, 1957 (R.); Howard S. Conn, ed., 479, Nov. '57.

The Yearbook of Neurology, Psychiatry, and Neurosurgery (R.); Roland P. Mackay, S. Bernard Wortis, and Oscar Sugar, ed., 478, Nov. '57.

Board, Richard G.: Reply to Dr. Friedman, 424, Nov. '57.

Bockoven, J. Sanbourne: See Greenblatt, Milton, jt. auth.

Bogen-Tietz, Esther; and Jordan, Jo H.: Rapid Treatment of the Psychotic Patient Integrating Electronarcosis and Psychoanalytic Psychotherapy, 68, July '57.

Bogoch, Samuel: Cerebrospinal Fluid Neuraminic Acid Deficiency in Schizophrenia (C.N.), 172, Aug. '57.

Bogoch, Samuel: The effect of a Special Diet on Hospitalized Schizophrenic Patients (C.N.), 261, Sept. '57.

Bogoch, Samuel: Fractionation and Quantitative Analysis of Cerebrospinal Fluid Constituents with Reference to Neuropsychiatric Disorders (C.N.), 1028, May '58.

Bortz, Edward L.: Growth and Aging, 114, Aug. '57.

Bourne, Harold: Insulin Coma in Decline, 1015, May '58.

Bowman, Claude C.: Normal Deviations From Reality, 439, Nov. '57.

Bowman, Karl M.; and Enge, Bernice: Certain Aspects of Sex Psychopath Laws, 690, Feb. '58.

Bowman, Peter W.: The Defective Delinquent, 147, Aug. '57.

Braceland, Francis J.: Psychiatry and the Science of Man (Academic Lecture), 1, July '57.

Braun, Manfred: Treatment of Psychoses with a Combination of Pacatal and Thorazine (C.N.), 460, Nov. '57.

Breitner, Carl: Marsilid in Catatonic Schizophrenia (C.R.), 941, Apr. '58.

Brill, Henry; and Patton, Robert E.: Analysis of 1955-1956 Population Fall in New York State Mental Hospitals in First Year of Large-Scale Use of Tranquilizing Drugs, 509, Dec. '57.

Bromberg, Walter: An Analysis of Therapeutic Argulness, 719, Feb. '58.

Bross, Irwin D. J.: See Hinkle, Lawrence E., jt. auth.

Bruck, Max A.: Electroencephalographic Changes in Chronic Schizophrenics under Chemotherapy (P.R.), 945, Apr. '58.

Bruckman, Norbert; Kitchener, Murray; Saunders, John C.; and Kline, Nathan S.: Mepazine (Pacatal)—Further Report (C.N.), 262, Sept. '57.

Buchmueller, A. D.: See O'Neal, Patricia, jt. auth.

Byers, Lawrence W.: See Heath, Robert G., jt. auth.

C

- Cahn, C.: *See* Azima, H., jt. auth.
- Cameron, D. Ewen: *The Use of Nucleic Acid in Aged Patients with Memory Impairment (P.R.)*, 943, Apr. '58.
- Cantril, Hadley: *Perception and Interpersonal Relations*, 119, Aug. '57.
- Cares, Reuben; Asrican, Edward; Fenichel, Maurice; Sack, Paul; Severino, Jean: *Therapeutic and Toxic Effects of Chlorpromazine Among 3,014 Hospitalized Cases*, 318, Oct. '57.
- Carlson, Eric T.: *Theodoric Romeyn Beck (H.N.)*, 754, '58.
- Carlson, Helen B.: *Characteristics of an Acute Confusional State in College Students*, 900, Apr. '58.
- Carmichael, Donald B.: *See* Kris, Else B., jt. auth.
- Carver, Michael J.: *See* Smith, Jackson A., jt. auth.
- Cavanaugh, Daniel J.; and Ervin, Frank R.: *Detection of Chlorpromazine in Body Fluids (C.N.)*, 171, Aug. '57.
- Cease, Eugene: *See* Hoshino, Arthur, jt. auth.
- Celian, Charles I.: *See* Flach, Frederic F., jt. auth.
- Charatan, Frederick B.; Denber, Herman C. B.; and Travis, John H.: *A Method for Accelerating Discharge from State Hospitals (A.N.)*, 939, Apr. '58.
- Chermak, M. W.: *An Acceptable Nonbarbiturate Sedative and Hypnotic for Mental Patients in a State Institution*, 932, Apr. '58.
- Chodoff, Paul; and Lyons, Henry: *Hysteris, The Hysterical Personalith and "Hysterical" Conversion*, 734, Feb. '58.
- Christian, D.: *See* Smith, J. A., jt. auth.
- Church, Edwin: *See* Offenkrantz, William, jt. auth.
- Cobb, Stanley: *Equus et Machina (Ed.)*, 759, Feb. '58.
- Cohen, Matthew: *See* Heath, Robert G., jt. auth.
- Cohen, Matthew: *See* Heath, Robert G., jt. auth.
- Coles, Martin R.: *See* Holland, Jimmie C. B., jt. auth.
- Collins, Ralph T.: *Industrial Psychiatry (Review of Psychiatric Progress, 1957)*, 627, Jan. '58.
- Cornelison, Alice R.: *See* Lidz, Theodore, jt. auth.
- Crone, Nora: *See* Gillis, A., jt. auth.
- Cross, Thomas N.: *See* Reinhart, Melvin J., jt. auth.

D

- Davidson, Henry A.: *Health Insurance and Psychiatric Coverage*, 498, Dec. '57.
- Denber, Herman C. B.: *See* Charatan, Frederick B., jt. auth.
- De Lalla, Oliver: *See* Strisower, Edward H., jt. auth.
- Despert, J. Louise; and Sherwin, Albert C.: *Further Examination of Diagnostic Criteria in Schizophrenic Illness and Psychoses*, 784, Mar. '58.
- Diethelm, Oskar: *Some Guiding Concepts in Dynamic Psychotherapy*, 805, Mar. '58.

- DiMascio, Alberto; Greenblatt, Milton; and Hyde, Robert W.: *A Study of the Effects of L.S.D.*, 309, Oct. '57.
- Domke, Herbert R.: *See* O'Neal, Patricia, jt. auth.
- Donnelly, John: *See* Gordon, Malcolm, jt. auth.
- Dunbar, Flanders: *Homeostasis During Puberty*, 673, Feb. '58.
- Durost, H.: *See* Azima, H., jt. auth.

E

- Ebaugh, F. G.: *Some Current Economic and Social Problems in Residency Training (Ed.)*, 559, Dec. '57.
- Egan, George P.: *See* Gore, Charles P., jt. auth.
- Ehrhardt, H.: *Psychiatry in Post-War Germany*, 414, Nov. '57.
- Eisenberg, Leon: *School Phobia: A Study in the Communication of Anxiety*, 712, Feb. '58.
- Eisenberg, Leon: *See* Kanner, Leo, jt. auth.
- Elliott, Robert: *See* Offenkrantz, William, jt. auth.
- Ellis, Rochard M., Jr.: *See* Whatmore, George B., jt. auth.
- Engle, Bernice: *See* Bowman, Karl M., jt. auth.
- Epstein, Joseph: *A New Naso Pharyngeal Airway for Use with Cerebral Electro-Convulsive Therapy (C.N.)*, 1030, May '58.
- Ervin, Frank R.: *See* Cavanaugh, Daniel J., jt. auth.
- Esquibel, Augusto; Krantz, John C., Jr.; Truitt, Edward B.; and Kurland, Albert A.: *The Use of Hexafluorodiethyl Ether (Indoklon) as an Inhalant Convulsant (C.N.)*, 461, Nov. '57.
- Ewing, John A.; and Haizlip, Thomas M.: *A Controlled Study of the Habit Forming Propensities of Meprobamate (C.N.)*, 835, Mar. '58.

F

- Fanning, Rita: *See* Smith, Jackson A., jt. auth.
- Farrar, C. B.: *Crime and Punishment (Ed.)*, 280, Sept. '57.
- Farrar, C. B.: *Idea and Act (Ed.)*, 374, Oct. '57.
- Feigley, Charles A.: *See* Heath, Robert G., jt. auth.
- Feigley, Charles A.: *See* Heath, Robert G., jt. auth.
- Feldman, Paul E.; and Statman, Jerome: *Agranulocytosis During Treatment with Methylpromazine (C.R.)*, 464, Nov. '57.
- Feldman, Paul E.: *Two-Year Fate Study of Thorazine Treated Patients*, 237, Sept. '57.
- Feldman, Paul E.: *Clinical Evaluation of Pacatal*, 143, Aug. '57.
- Fenichel, Maurice: *See* Cares, Reuben, jt. auth.
- Ferguson Rodger, T.: *European and British Psychiatry*, 97, Aug. '57.
- Fernandes, Henrique J. de: *Contemporary Psychiatry in Portugal*, 923, Apr. '58.
- Fereira, Antonio J. De Liz; and Freeman, Harry: *A Clinical Trial of Marshall in Psychotic Depressed Patients (C.N.)*, 933, Apr. '58.
- Fink, Ludwig; and Vlianos, George: *Clinical Impressions of the Response to Promazine Therapy (C.N.)*, 1031, May '58.

- Flach, Frederic F.; Celian, Charles I.; and Rawson, Rulon W.: Treatment of Psychiatric Disorders with Triiodothyronine (C.N.), 841, Mar. '58.
- Fleck, Stephen: *See* Lidz, Theodore, jt. auth.
- Fleming, A. M.: *See* Malamud, William, jt. auth.
- Flynn, Thomas T.: *See* Blackman, Nathan, jt. auth.
- Forrest, Fred M.; Forrest, Irene S.; and Mason, Aaron S.: A Rapid Urinary Test for Chlorpromazine, Promazine and Pacatal: A Supplementary Report (C.N.), 931, Apr. '58.
- Forrest, Irene S.: *See* Forrest, Fred M., jt. auth.
- Freed, Herbert: The Use of Ritalin[®] Intravenously as a Diagnostic Adjuvant in Psychiatry (P.R.), 944, Apr. '58.
- Freeman, Walter: Psychosurgery (Review of Psychiatric Progress, 1957) 608, Jan. '58.
- French, Elizabeth G.: Epilepsy (Review of Psychiatric Progress, 1957), 624, Jan. '58.
- Frey, Lavonne M.: Psychiatric Nursing (Review of Psychiatric Progress, 1957), 630, Jan. '58.
- Freyhan, Fritz A.: Eugen Bleuler's Concept of the Group of Schizophrenias at Mid-Century, 769, Mar. '58.
- Friedman, Lawrence: Correction and Retribution in the Criminal Law, 421, Nov. '57.
- Friedman, Paul; and Linn, Louis: Some Psychiatric Notes on the *Andrea Doria* Disaster, 426, Nov. '57.
- Friedman, Tobias T.: *See* Malamud, William, jt. auth.

G

- Gabriel, Anthony R.: *See* Impastato, David J., jt. auth.
- Galdston, Iago: International Psychiatry, 103, Aug. '57.
- Gantt, W. Horsley: Objectivity in Psychiatry (Ed.); 1046, May '58.
- Gardner, Abraham: Meproamate: A Clinical Study, 524, Dec. '57.
- Gardner, Abraham: Transorbital Leucotomy in Noninstitutional Cases, 140, Aug. '57.
- Gildea, Margaret C.-L.; Domke, Herbert R.; Mensh, Ivan N.; Buchmueller, A. D.; Glidewell, John C.; and Kantor, Mildred B.: Community Mental Health Research: Findings After Three Years, 970, May '58.
- Gildea, Margaret C.-L.: *See* Glidewell, John C., jt. auth.
- Gillia, A.; Lascelles, C. F.; and Crone, Nora: A Comparison of Rhythmic and Non-Rhythmic Music in Chronic Schizophrenia, June '58.
- Gittinger, John W.: *See* Hinkle, Lawrence E., jt. auth.
- Glenn, Abraham: *See* Blackman, Lionel H., jt. auth.
- Glidewell, John C.: *See* Gildea, Margaret C.-L., jt. auth.
- Glidewell, John C.; Mensh, Ivan N.; and Gildea, Margaret C.-L.: Behavior Symptoms in Children and Degree of Sickness, 47, July '57.
- Goebel, David: *See* Hinkle, Lawrence E., jt. auth.

- Gofman, John W.: *See* Strisower, Edward H., jt. auth.
- Goldberger, Leo: *See* Hinkle, Lawrence E., jt. auth.
- Gonda, Victor E.: Wagner-Jauregg and the "Priority" of Producing Artificial Fever for Treatment of General Paresis (Ed.), 561, Dec. '57.
- Gordon, Malcolm; Zeller, William; and Donnelly, John: A Biochemical Evaluation of the Activity of Certain Tranquilizers and their Relationship to Hormonal Function, 201, Sept. '57.
- Gore, Charles P.; Egan George P.; and Wlaton, Donald: The Place of Reserpine in the Treatment of the Chronic Psychotic Patient, 333, Oct. '57.
- Goulding, Carl: *See* Smith, J. A., jt. auth.
- Gralnick, Alexander: *See* Silverberg, J. William, jt. auth.
- Greaves, Donald C.: The Role of the Psychiatrist in Teaching Comprehensive Medical Care, 42, July '57.
- Greenblatt, Milton; Landy, David; Hyde, Robert W.; and Bockoven, J. Sanbourne: Rehabilitation of the Mentally Ill: Impact of a Project Upon Hospital Structure, 986, May '58.
- Greenblatt, Milton: *See* DiMascio, Alberto, jt. auth.
- Gurgin, Leo: *See* Long, Robert T., jt. auth.

H

- Hadden, Samuel B.: Treatment of Homosexuality by Individual and Group Psychotherapy, 810, Mar. '58.
- Haizlip, Thomas M.: *See* Ewing, John A., jt. auth.
- Hall, Richard: *See* Levine, David, jt. auth.
- Halloran, Alden V.: *See* Simone, Werner, jt. auth.
- Hardin, Garrett: The Threat of Clarity, 392, Nov. '57.
- Hawkins, David R.: Electroshock Technique (C.N.), 1032, May '58.
- Hawkins, Norman G.: Breathing Deficit, Allergy and Alcoholism, 707, Feb. '58.
- Hastings, Donald W.: Follow-Up Results in Psychiatric Illness; June '58.
- Heath, Robert G.; Leach, Byron E.; Byers, Lawrence W.; Martens, Sten; and Feigley, Charles A.: Pharmacological and Biological Psychotherapy, 683, Feb. '58.
- Heath, Robert G.; Martens, Sten; Leach, Byron E.; Cohen, Matthew, and Feigley, Charles A.: Behavioral Changes in Nonpsychotic Volunteers following the Administration of Taraxecin, the Substance Obtained from Serum of Schizophrenic Patients, 917, Apr. '58.
- Heath, Robert G.; Martens, Sten; Leach, Byron E.; Cohen, Matthew; and Angel, Charles: Effect on Behavior in Humans with the Administration of Taraxecin, 14, July '57.
- Heistad, Gordon T.: A Bio-Psychological Approach to Somatic Treatments in Psychiatry, 540, Dec. '57.
- Helper, Eleanor W.: The Effect of Tranquilizing Drugs on Enzyme Systems, 1011, May '58.
- Henderson, Harry: *See* Smith, J. A., jt. auth.

- Higgins, George A.: *See* Olson, W. E., jt. auth.
 Hinckley, Robert G.: *See* Simon, Werner, jt. auth.
 Hinks, C. M.: *See* Melvin Johnson, 959, Apr. '58.
 Hine, Frederick R.: Severe Angioneurotic Edema During Chlorpromazine Therapy (C.R.), 942, Apr. '58.
 Hinkle, Lawrence E., Jr.; Plummer, Norman, Metraux, Rhoda, Richter, Peter; Gittinger, John W.; Thetford, William N.; Ostfeld, Adrian M.; Kane, Francis D.; Goldberger, Leo; Mitchell, William E.; Leichter, Hope; Pinsky, Ruth; Goebel, David; Bross, Irwin D. J.; and Wolff, Harold G.: *Studies in Human Ecology*, 212, Sept. '57.
 Hoch, Paul H.; and Lewis, Nolan D. C.: *Clinical Psychiatry and Psychotherapy* (Review of *Psychiatric Progress*, 1957), 599, Jan. '58.
 Hoch, Paul H.: *See* Horwitz, William A., jt. auth.
 Hoffer, A.: Adrenochrome in Blood Plasma (C.N.), 752, Feb. '58.
 Holland, Jimmie C. B.; and Coles, Martin R.: *Neuropsychiatric Aspects of Acute Poliomyelitis*, 54, July '57.
 Hollister, Leo El: *Unexpected Asphyxial Death and Tranquilizing Drugs* (C.N.), 366, Oct. '57.
 Hopkins, G. Wendell: *See* Simon, Werner, jt. auth.
 Horwitz, William A.; Polatin, Philip, Kolb, Lawrence C.; and Hoch, Paul H.: *A Study of Cases of Schizophrenia Treated by "Direct Analysis,"* 780, Mar. '58.
 Hoshino, Arthur; and Cease, Eugene: *Iproniazid Phosphate in the Treatment of the Chronic Hospitalized Schizophrenic*, June '58.
 Huber, William G.: *See* Lane, G. Gorham, jt. auth.
 Hume, Portia Bell: *A Note on Psychiatric Developments in the San Francisco Bay Area*, 926, Apr. '58.
 Hurst, L. D.: *The Unlocking of Wards in Mental Hospitals*, 306, Oct. '57.
 Hyde, Robert W.: *See* Greenblatt, Milton, jt. auth.
 Hyde, Robert W.: *See* DiMascio Alberto, jt. auth.

I

- Impastato, David J.; and Gabriel, Anthony R.: *P.M.-G.M. Succinylcholine-Modified Electroshocktherapy Without Barbiturates*, 698, Feb. '58.

J

- Jaco, E. Gartly: *See* Williams, W. S., jt. auth.
 Jacoby, M. G.: *High Dosage Chlorpromazine Therapy After Previous Agranulocytosis* (C.R.), 1040, May '58.
 Jessner, Lucie: *See* Long, Robert T., jt. auth.
 Jones, Arthur L.: *See* Shagass, Charles, jt. auth.
 Jordan, Jo H.: *See* Bogen-Tietz, Esther, jt. auth.
 Josselyn, Irene M.: *See* Mohr, George J., jt. auth.

K

- Kafka, John S.: *A Method for Studying the Organization of Time Experience*, 546, Dec. '57.
 Kahn, Eugen: *See* Kinross-Wright, Vernon jt. auth.

- Kahn, Eugen: *Information Values* (Ed.), 375, Oct. '57.
 Kahn, Eugen: *Second International Congress For Psychiatry* (Ed.), 467, Nov. '57.
 Kahn, Theodore C.; and Murphy, Paul D.: *A New Symbol Approach to Personality Assessment*, 741, Feb. '58.
 Kaila Kauko: *Psychiatry and Higher Education in Finland*, 1023, May '58.
 Kallmann, Franz J.: *Heredity and Eugenics* (Review of *Psychiatric Progress*, 1957), 586, Jan. '58.
 Kane, Francis D.: *See* Hinkle, Lawrence E., jt. auth.
 Kanner, Leo: *The Cart Before the Horse* (Ed.), 948, Apr. '58.
 Kanner, Leo; and Eisenberg, Leon: *Child Psychiatry and Mental Deficiency* (Review of *Psychiatric Progress*, 1957) 609, Jan. '58.
 Kantor, Mildred B.: *See* Gildea, Margaret C.-L., jt. auth.
 Kaplan, Stanley M.: *See* Shanon, Jay, jt. auth.
 King, Peter D.: *A Statistical Comparison of Two Methods of ECT* (C.N.), 555, Dec. '57.
 Kinross-Wright, Vernon; and Kahn, Eugen: *Of Schizophrenia and the Schizophrenic*, 703, Feb. '58.
 Kinross-Wright, Vernon; and Moyer, John H.: *Observations Upon the Therapeutic Use of Benactyzine Suavetil* (C.N.), 73, July '57.
 Kitchener, Murray: *See* Bruckman, Norbert, jt. auth.
 Kline, Nathan S.: *A Point of View as to the Nature of Schizophrenia*, 505, Dec. '57.
 Kline, Nathan S.: *See* Bruckman, Norbert, jt. auth.
 Kolb, Lawrence C.: *See* Horwitz, William A., jt. auth.
 Konikov, William: *See* Saltzman, Charles, jt. auth.
 Kraines, S. H.: *The Physiologic Basis of the Manic Depressive Illness: A Theory*, 206, Sept. '57.
 Krantz, John C., Jr.: *See* Esquibel, Augusto, jt. auth.
 Krapf, E. E.: *Response to the Fellowship Lecture by Gregory Zilboorg on Eugen Bleuler*.
 Krauss, Stephen: *Trinuride H.: A New Antiepileptic Drug* (C.N.), 748, Feb. '58.
 Kris, Else B.; and Carmichael, Donald M.: *Follow-Up Study on Thorazine Treated Patients*, 449, Nov. '57.
 Kris, Else B.: *Simplifying Chlorpromazine Maintenance Therapy* (C.N.), 836, Mar. '58.
 Kubzansky, P.: *See* Wexler, D., jt. auth.
 Kurland, Albert A.: *See* Esquibel, Augusto, jt. auth.

L

- Lamont, John H.: *See* Long, Robert T., jt. auth.
 Landy, David: *See* Greenblatt, Milton, jt. auth.
 Lane, G. Gorham; Huber, William G.; and Smith, F. Loren: *The Effect of Chlorpromazine on the Behavior of Disturbed Children*, 937, Apr. '58.
 Langworthy, O. R.: *Neuropathology, Endocrinology, and Biochemistry* (Review of *Psychiatric Progress*, 1957), 590, Jan. '58.

- Lantz, Edna M.: *See* Wilson, David C., jt. auth.
- Lanzkron, John; and Wolfson, W.: Prognostic Value of Perceptual Distortion of Temporal Orientation in Chronic Schizophrenics, 744, Feb. '58.
- Lascara, Vincent Edward: Psychophysiological Gastrointestinal Reactions, 457, Nov. '57.
- Lascelles, C. F.: *See* Gillis, A., jt. auth.
- Leach, Byron E.: *See* Heath, Robert G., jt. auth.
- Leach, Byron E.: *See* Heath, Robert G., jt. auth.
- Leach, Byron E.: *See* Heath, Robert G., jt. auth.
- Leach (Byron E.): *See* Heath, Robert G., jt. auth.
- Lebensohn, Zigmond: A Note on Wagner-Jauregg, June '58.
- Leichter, Hope: *See* Hinkle, Lawrence E., jt. auth.
- Leiderman, P. H.: *See* Wexler, D., jt. auth.
- Leiderman, P. H.: *See* Solomon, Philip, jt. auth.
- Lesse, Stanley: Current Clinical and Research Trends in Soviet Psychiatry, 1018, May '58.
- Levin, Max: Duplication Double Orientation and Fusion, 162, Aug. '57.
- Levine, David; Marks, Harry K.; and Hall, Richard: Differential Effects of Factors in an Activity Therapy Program, 532, Dec. '57.
- Lewis, N. D. C.: *See* Hoch, Paul H., jt. auth.
- Lewis, N. D. C.: Historical Roots of Psychotherapy, 795, Mar. '58.
- Liberson, W. T.: Electroencephalography (Review of Psychiatric Progress 1957), 593, Jan. '58.
- Lidz, Theodore; Cornelison, Alice R.; Fleck, Stephen; and Terry, Dorothy: The Intrafamilial Environment of Schizophrenic Patients II: Marital Schism and Marital Skew, 241, Sept. '57.
- Lief, Harold I.; and Stevenson, Ian P.: Psychological Aspects of Prejudice with Special Reference to Desegregation, 816, Mar. '58.
- Lifschutz, Joseph E.: Hysterical Stigmatization, 527, Dec. '57.
- Linden, Maurice E.: Relationship Between Social Attitudes Toward Aging and the Delinquencies of Youth, 444, Nov. '57.
- Linn, Louis: *See* Friedman, Paul, jt. auth.
- Long, Robert T.; Lamont, John H.; Whipple, Babette; Bandler, Louise; Blom, Gaston E.; Gurgin, Leo; and Jessner, Lucie: A Psychosomatic Study of Allergic and Emotional Factors in Children with Asthma, 890, Apr. '58.
- Lund, Benjamin: *See* Simon, Werner, jt. auth.
- Lyons, Henry: *See* Chodoff, Paul, jt. auth.
- Martin, Harold R.: *See* McLean, Dougald D., jt. auth.
- Mason, Aaron S.: *See* Forrest, Fred M., jt. auth.
- Mason-Browne, N. L.: Perphenazine—A Drug Modifying Consciousness (C.N.), 173, Aug. '57.
- Masterson, James F., Jr.: Prognosis in Adolescent Disorders, June '58.
- Mathews, Frank P.: Dartal: A Clinical Appraisal (C.N.), 1034, May '58.
- May, Sophia Belle; *See* Phillips, Frederick, jt. auth.
- McKnight, W. K.: Historical Landmarks in Research on Schizophrenia in the United States, 873, Apr. '58.
- McLean, Dougald D.; Martin, Harold R.; Ellingson, Robert J.; and Smith, Jackson A.: Seizures During Therapy with Phenothiazine Derivatives (C.N.), 934, Apr. '58.
- Melican, Thomas P.: *See* Blackman, Nathan, jt. auth.
- Mendelsohn, J.: *See* Wexler, D., jt. auth.
- Mendelsohn, J.: *See* Solomon, Philip, jt. auth.
- Mensh, Ivan N.: *See* Gildea, Margaret C.-L., jt. auth.
- Mensh, Ivan N.: *See* Glidewell, John C., jt. auth.
- Metraux, Rhoda: *See* Hinkle, Lawrence E., jt. auth.
- Middleton, P. Mck.: *See* Malamud, W., jt. auth.
- Mielke, F. A.: Methods Employed and Results Obtained in Psychiatric Studies with New Drugs Acting on the Brain Stem, 134, Aug. '57.
- Miller, Paul R.: The Prison Code, 583, Jan. '58.
- Mitchell, William E.: *See* Hinkle, Lawrence E., jt. auth.
- Mohr, George J.; Josselyn, Irene M.; Spurlock, Jeanne, and Barron, S. H.: Studies in Ulcerative Colitis, June '58.
- Mokrasch, L. C.: *See* Stevenson, Ian, jt. auth.
- Moore, Merrill: *See* Alexander, Leo, jt. auth.
- Mosse, Hilde L.: The Misuse of the Diagnosis Childhood Schizophrenia, 791, Mar. '58.
- Moyer, John H.: *See* Kinross-Wright, Vernon, jt. auth.
- Murphy, Paul D.: *See* Kahn, Theodore C., jt. auth.

N

- Noordsij, A. J.; and Smith, Jackson A.: Vasolastine in the Treatment of Arteriosclerosis (C.N.), 836, Mar. '58.
- Norgan, Anne: *See* Vanderkamp, Harry, jt. auth.

O

- Malamud, William; and Overholser, Winfred: Multidisciplinary Research in Schizophrenia, 865, Apr. '58.
- Malamud, William; Barton, Walter; Fleming A. M.; Middleton, P. Mck.; Friedman, Tobias T.; and Schleifer, M. J.: The Evaluation of the effects of Derivatives of Rauwolfia in the Treatment of Schizophrenia, 193, Sept. '57.
- Margolin, Sydney G.: On Some Principles of Therapy, June '58.
- Marks, Harry K.: *See* Levine, David, jt. auth.
- Martens, Sten: *See* Heath, Robert G., jt. auth.
- Martens, Sten: *See* Heath, Robert G., jt. auth.
- Martens, Sten: *See* Heath, Robert G., jt. auth.
- Offenkrantz, William; Church, Edwin; and Elliott, Robert: Psychiatric Management of Suicide Problems in Military Service, 33, July '57.
- Olariu, John: *See* Tolan, Eliere J., jt. auth.
- Olinger, Leon: *See* Blackman, Lionel H., jt. auth.
- Olson, W. E.; and Higgins, George A.: Mental Depression Associated with Hyperadrenocorticism (C.R.), 1041, May '58.
- O'Neal, Patricia; and Robins, Lee N.: The Relation of Childhood Behavior Problems to Adult Psychiatric Status: A 30-Year Follow-Up Study of 150 Subjects, 961, May '58.

- O'Neal, Patricia: *See* Robins, Eli, jt. auth.
 Opler, Marvin K.: Group Psychotherapy: Individual and Cultural Dynamics in a Group Process, 433, Nov. '57.
 Ostfeld, Adrian M.: *See* Hinkle, Lawrence E., jt. auth.
 Overholser, Winfred: *See* Malamud, William, jt. auth.
 Ozarin, Lucy D.: Patterns of Movement in General Hospital Psychiatric Wards, 977, May '58.
 Ozarin, Lucy D.: *See* Tuma, A. H.; jt. auth.

P

- Paganini, A. E.; and Zlotlow, M.: Two-Year Follow-Up Study of the Relationship of Chlorpromazine and the Incidence of Convulsions in 50 Post Lobotomy Patients (C.N.), 839, Mar. '58.
 Patton, Robert E.: *See* Brill, Henry, jt. auth.
 Pearl, David: *See* Vanderkamp, Harry, jt. auth.
 Pennington, Veronica M.: Use of Miltown (Meprobamate) with Psychotic Patients, 257, Sept. '57.
 Pennington, Veronica M.: Chemical Concepts of Psychosis (Ed.), 467, Nov. '57.
 Phillips, Frederick; and May, Sophia Belle: A Study of the Transfer of Long-Hospitalized Patients to a Convalescent Service, 344, Oct. '57.
 Pierce, Chester, M.: *See* Shanon, Jay, jt. auth.
 Pinsky, Ruth: *See* Hinkle, Lawrence E., jt. auth.
 Plummer, Norman: *See* Hinkle, Lawrence E., jt. auth.
 Polatin, Philip: *See* Horwitz, William A., jt. auth.
 Pollack, Benjamin: The Effect of Chlorpromazine in Reducing the Relapse Rate in 716 Released Patients (C.N.), 749, Feb. '58.
 Pressman, Maurie D.: *See* Smarr, Erwin R., jt. auth.
 Pulver, Sydney E.: *See* Robitscher, J. B., jt. auth.

R

- Rado, Sandor: Narcotic Bondage, 165, Aug. '57.
 Rawson, Rulon W.: *See* Flach, Frederic F., jt. auth.
 Redlich, Frederick C.: Social Aspects of Psychotherapy, 800, Mar. '58.
 Regan, Peter F.: Effective Utilization of Electric Convulsive Treatment, 351, Oct. '57.
 Reid, John R.: Logical Analysis, 397, Nov. '57.
 Reinhart, Melvin J.; Silverstein, Bernard S. and Cross, Thomas N.: A Case of Agranulocytosis Following "Sparine" Administration (C.R.), 462, Nov. '57.
 Reiser, H.: Erwin Stransky on His Eightieth Birthday (Ed.), 466, Nov. '57.
 Relyea, Ruth P.: *See* Saltzman, Charles, jt. auth.
 Riechter, Peter: *See* Hinkle, Lawrence E., jt. auth.
 Robie, T. R.: Mersilid in Depression (C.N.), 936, Apr. '58.
 Robins, Eli; Schmidt, Edwin H.; and O'Neal, Patricia: Some Interrelations of Social Factors and Clinical Diagnosis in Attempted Suicide, 221, Sept. '57.
 Robins, Lee N.: *See* O'Neal Patricia, jt. auth.

- Robitscher, J. B.; and Pulver, Sydney E.: Orphenadrine in the Treatment of Depression (C.N.), June '58.
 Rome, Howard P.: Francis J. Braceland, President, 1956-57, 10, July '57.
 Rond, Philip C.: Samuel Mitchel Smith—First Professor of Psychiatry (H.N.), 843, Mar. '58.
 Ross, Donald W.: *See* Shanon, Jay, jt. auth.
 Rubinger, J. H.: *See* Weiss, I. I., jt. auth.
 Rudy, L. H.; Rinaldi, F.; Costa, E.; Himwich, H. E.; Tuteur, W.; and Glotzer, J.: Trifluopromazine and Trifluoperazine: Two New Tranquilizers, 747, Feb. '58.
 Rutherford, Avonell: *See* Smith, Jackson A., jt. auth.
 Ryan, W. Carson: Mental Health in Education (Review of Psychiatric Progress, 1957), 626, Jan. '58.
 Ryzen, N.: *See* Weiss, I. I., jt. auth.

S

- Sack, Paul: *See* Cares, Reuben, jt. auth.
 Saltzman, Charles; Konikov, William; and Relyea, Ruth P.: Further Experiences with Electroshock Therapy Modified by Anectine, 1033, May '58.
 Sanchez, Andrew J.: *See* Stevenson, Ian, jt. auth.
 Saunders, John C.: *See* Bruckman, Norbert, jt. auth.
 Scanlon, W. G.; and White, William M.: Iproniazid (Marsilid): Its Use in Office Treatment of Depression (C.N.), 1036, May '58.
 Schleifer, M. J.: *See* Malamud, William, jt. auth.
 Schmidt, Edwin H.: *See* Robins, Eli, jt. auth.
 Schneek, Jerome M.: Hypnotherapy for Achalasia of the Esophagus (Cardiospasm) (C.R.), 1042, May '58.
 Schopbach, Robert R.: Clinical Note Concerning Iproniazid (Marsilid) (C.N.); 838, Mar. '58.
 Schwartz, Morris S.: Contributions of Social Science to the Administrative Process in the Mental Hospitals, 493, Dec. '57.
 Severino, Jean: *See* Cares, Reuben, jt. auth.
 Shagass, Charles; and Jones, Arthur L.: A neurophysiological Test for Psychiatric Diagnosis: Results in 750 Patients, 1002, May '58.
 Shanon, Jay; Kaplan, Stanley M.; Pierce, Chester M.; and Ross, W. Donald: An Interesting Reaction to a Tranquilizer: Tonic Seizures with Perphenazine (Trilafon) (C.N.): 556, Dec. '57.
 Shepherd, Michael: An English View of American Psychiatry, 417, Nov. '57.
 Silverberg, J. William; and Gralnick, Alexander: Possible Synergistic Action of Chlorpromazine, Reserpine and Frenquel (C.N.) 173, Aug. '57.
 Silverstein, Geinard S.: *See* Reinhart, Melvin J., jt. auth.
 Simon, Werner; Wirt, Robert D.; Wirt, Anne L.; Halloran, Alden V.; Hackley, Robert G.; Lund, J. Benjamin and Hopkins, G. Wendell: A Controlled Study of the Short-Term Differential Treatment of Schizophrenia, June '58.
 Smarr, Erwin R.; Wolf, Herman, and Pressman, Maurie D.: Experiences with Marsilid with Report of One Death (C.N.), June '58.

- Smith, F. Loren: *See* Lane, G. Gorham, jt. auth.
- Smith, Jackson A.: The Use of Oral Hypoglycemic Agents in the Treatment of Schizophrenia (C.N.), June '58.
- Smith, Jackson A.: *See* Noordsij, A. J., jt. auth.
- Smith, Jackson A.; Carver, Michael J.; and Helper, Eleanor W.: The Effect of Tranquilizing Drugs on Enzyme Systems, 1011, May '58.
- Smith, Jackson A.; Rutherford, Avonell; and Fanning, Rita: A Comparison of Phenaglycodol (Ultrán) Meprobamate and a Placebo in Abstinent Alcoholics (C.N.), 364, Oct. '57.
- Smith, Lauren H.: A Realistic Approach to Training Research Personnel (Ed.), 849, Mar. '58.
- Solomon, P.: *See* Wexler, D., jt. auth.
- Solomon, Philip; Leiderman, P. H.; Mendelson, J.; and Wexler, D.: Sensory Deprivation: A Review, 357, Oct. '57.
- Sorin, M.: *See* Weiss, I. I., jt. auth.
- Spurlock, Jeanne: *See* Mohr, George J., jt. auth.
- Staras, Henry; and Tourlentes, Thomas T.: Management of Severe Chronic Psychotics with Sustained Release Chlorpromazine, June '58.
- Statman, Jerome: *See* Feldman, Paul E., jt. auth.
- Stearns, A. Warren: Murder By Adolescents with Obscure Motivation, 303, Oct. '57.
- Stevenson, Ian; and Mokrasch, L. C.: A Further Note on the Mechanism of the Antidotal Action of Sodium Succinate in the Mescaline Psychosis (C.N.), 1037, May '58.
- Stevenson, Ian: *See* Lief, Harold I., jt. auth.
- Stevenson, Ian; and Sanchez, Andrew J.: The Antidotal Action of Sodium Succinate in the Mescaline Psychosis, 328, Oct. '57.
- Stevenson, Ian: Is the Human Personality More Plastic in Infancy and Childhood?, 152, Aug. '57.
- Straight, Belinda; and Werkman, Sidney L.: Control Problems in Group Therapy with Aggressive Adolescent Boys in a Mental Hospital, 998, May '58.
- Strisower, Beverly: *See* Strisower, Edward H., jt. auth.
- Strisower, Edward H.; De Lalla, Oliver; Gofman, John W.; and Strisower, Beverly: Serum Lipoprotein Concentrations in a Schizophrenic Population (C.N.), 263, Sept. '57.
- Szasz, Thomas S.: The Problem of Psychiatric Nosology: A Contribution to a Situational Analysis of Psychiatric Operations, 405, Nov. '57.
- T
- Tait, C. Downing: Therapeutic Community for Delinquents? (Ed.), 850, Mar. '58.
- Terhune, William B.: Administrative Psychiatry: A New Field—Challenging and Rewarding, 64, July '57.
- Terry, Dorothy: *See* Lidz, Theodore, jt. auth.
- Thetford, William N.: *See* Hinkle, Lawrence E., jt. auth.
- Tilden, Sidney J.: Protein Intoxication and Quantitative Determination in Serum, 232, Sept. '57.
- Timberlake, William H.: Clinical Neurology (Review of Psychiatric Progress, 1957), 615, Jan. '58.
- Tolan, Eliere J.; and Olariu, John: Treatment of Parkinsonism, 518, Dec. '57.
- Tourlentes, Thomas T.: *See* Staras, Henry, jt. auth.
- Travis, John H.: *See* Charatan, Frederick B., jt. auth.
- Treadway, W. T.: California Mental Health Services (Ed.), 376, Oct. '57.
- Tuma, A. H.; and Ozarin, Lucy D.: Patient "Privileges" in Mental Hospitals, June '58.
- Turner, William J.; and Merlis, Sidney: Chemotherapeutic Trials in Psychosis III: 2-Brom-D-Lysergic Acid Diethylamide (BOL 148) (C.N.), 751, Feb. '58.
- Tuteur, Werner: The "Double Blind" Method: Its Pitfalls and Fallacies, 921, Apr. '58.
- Truitt, Edward B.: *See* Esquibel, Augusto, jt. auth.
- U
- Ulett, George A.: Experience with Photic Stimulation in Psychiatric Research, 127, Aug. '57.
- Unger, Hans: The "Reader of a Paper" and the "Listener": Some Heretic Thoughts (Ed.), 949, Apr. '58.
- Usdin, Gene L.: The Physician and Testamentary Capacity, 249, Sept. '57.
- V
- Vanderkamp, Harry; Norgan, Anne; Wilkinson, Gladys W.; and Pearl, David: The Mecholyl Test as a Predictor of Improvement in Insulin Coma Therapy (C.N.), 365, Oct. '57.
- Veith, Ilza: Psychiatric Nosology: From Hippocrates to Kraepelin, 385, Nov. '57.
- Villien, L. M.: *See* Weatherly, J., jt. auth.
- Vlavianos, George: *See* Fink, Ludwig, jt. auth.
- W
- Walton, Donald: *See* Gore, Charles P., jt. auth.
- Weatherly, J.; and Villien, L. M.: Treatment of a Case of Psychotic Depression Complicated by Aortic Homograph Replacement, June '58.
- Weiss, I. I.; Rubinger, J. H.; Sorin, M.; and Ryzen, N.: Trilafon Treatment in Psychotics, 1118, June '58.
- Weiss, James, M. A.: *See* Blackman, Nathan, jt. auth.
- Werkman, Sidney L.: *See* Straight, Belinda, jt. auth.
- Wexler, D.; Leiderman, P. H.; Mendelson, J.; Kubzansky, P.; and Solomon, P.: The Effect of Cetadiol on Delirium Tremens, Alcoholic Hallucinations, and Alcohol Withdrawal (C.N.), 935, Apr. '58.
- Wexler, Donald: *See* Solomon, Philip, jt. auth.
- Whatmore, George B.; and Ellix, Richard M., Jr.: Some Motor Aspects of Schizophrenia: An EMG Study, 882, Apr. '58.

- Whipple, Eubette. See Long, Ernest I., jt. auth.
- White, William M. See Simson, Werner, jt. auth.
- Whitmore, John C. *American Psychiatry*, 1957, Aug. '57.
- Whitmore, John C.: **Psychiatric Implications of the "Placebo Effect" (E4)**, 662, Jan. '58.
- Wideman, Robert W. See Vandenkamp, Harry, jt. auth.
- Wilder, Warren S. *Psychiatric Facilities in Prisons and Correctional Institutions in the United States*, 481, Dec. '57.
- Williams, Warren S., and Jaso, Garth E.: *An Evaluation of Functional Psychoses in Old Age*, 619, Apr. '58.
- Wilmer, Harry A.: **Toward a Definition of the Therapeutic Community**, 824, Mar. '58.
- Wilson David, C., and Lantz, Helen M.: *The Effect of Culture Change on the Negro Race in Virginia as Indicated by a Study of State Hospital Admissions*, 25, July '57.
- Wirt, Anne L.: See Simson, Werner, jt. auth.
- Wirt, Robert D. See Simson, Werner, jt. auth.
- Wish, Herman. See Stuart, Edwin E., jt. auth.
- Wolf, Herbert F.: *Effects of Four Years of Intensive Therapy for Chronic Mental Patients and the Value of an Institutional Maintenance Phase of ECT*, 453, Nov. '57.
- Wolf, Harold G. See Hinkle, Lawrence L., jt. auth.
- Wolson, W. See Lawzkren, John, jt. auth.
- Woods, Joseph: *Physiological Treatment (Review of Psychiatry Progress, 1957)*, 603, Jan. '57.
- Wyatt, Frederick: *Clinical Psychology (Review of Psychiatry Progress, 1957)*, 597, Jan. '58.

Z

- Zeller, William: See Gordon, Malcolm, jt. auth.
- Zilboorg, Gregory: *Fellowship Lecture: Eugen Bleuler and Present-Day Psychiatry*, 289, Oct. '57.
- Zlotow, M.: See Paganini, A. E., jt. auth.





anxiety is the voice of stress

surgery
is a time
of stress

Representative Case Report:

Mrs. N.F., aged 43—panhysterectomy

Anxiety, insomnia, and emotional instability complicating preparation for surgery. For psychic support, EQUANIL therapy was started ten days before operation. The tension symptoms diminished, and the patient became cooperative. Post-operatively, the drug was continued, maintaining the patient's emotional equilibrium and thereby accelerating convalescence.



EQUANIL

Meprobamate

PHENERGAN® HCl

Promethazine HCl

SPARINE® HCl

Promazine HCl



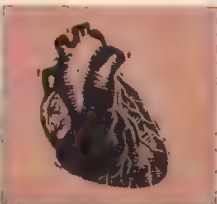
Philadelphia 1, Pa.

Equanil
Meprobamate

A Wyeth normotropic drug for nearly every patient under stress

Relieves tension—mental and muscular

in each of these indications for a tranquilizer...



SR is a cardiac patient. His doctor put him on ATARAX because (+) it is an anti-arrhythmic and non-hypotensive tranquilizer.



Other tranquilizers added to PN's g. i. discomfort (he has ulcers). But now his doctor has him on ATARAX because (+) it lowers gastric secretion while it tranquilizes.



Asthmatic JL used to have frequent tantrums followed by acute bronchospasm. Her family doctor tranquilized her with ATARAX because (+) it is safe, even for children.



Senile anxiety and persecution complex dogged Mrs. K. until her doctor prescribed ATARAX Syrup. (+) It tastes good, and it's a perfect vehicle for Mrs. K's tonic.

Dosage: Children, 1-2 10 mg. tablets or 1-2 tsp. Syrup t.i.d. Adults, one 25 mg. tablet or 1 tbsp. Syrup q.i.d.

Supplied: 10, 25 and 100 mg. tablets, bottles of 100. Syrup, pint bottles. Parenteral Solution, 10 cc. multiple-dose vials.

...ATARAX

gives you an
extra benefit

(BRAND OF HOBBS-MILLS)



NEW YORK 11 NEW YORK
Division Chan Pfizer
& Co. Inc.

Timesaving



all-day

or all-night
'Compazine' therapy
with a single oral dose

'Compazine' Spansule capsules provide:

- Timesaving administration in the hospital—only one or two doses daily.
- Rapid onset of action—as fast as tablet medication.
- Sustained therapeutic effect—continuous action for 10 to 12 hours.

NEW 30 mg. 'Compazine' Spansule capsules are especially useful in psychiatric patients who require 30 mg. or more of 'Compazine' daily.

Compazine* Spansule*

prochlorperazine, S.K.F.

sustained release capsules, S.K.F.

Smith Kline & French Laboratories, Philadelphia

*spin
out
the
devil!*



Rotating chair used for calming mental patients (18th century)
Original wood engraving by John de Pol.

*spin
out
the
devil!*

Psychiatry has advanced far beyond such crude devices for treatment of the mentally ill.

But perhaps the greatest advance in psychiatry has come through chemotherapy—an adjunct to the treatment of mental illness pioneered and established with 'Thorazine'.

Not only has 'Thorazine' speeded the recovery of thousands of hospitalized mental patients, it has also helped to keep many thousands out of the hospitals. Its use in psychiatry is still increasing because its consistently high degree of effectiveness and its relative safety have been established by extensive long-term use in mental hospitals throughout the country.

THORAZINE*

chlorpromazine, S.K.F.

the fundamental drug in psychiatry

Smith Kline & French Laboratories, Philadelphia 1

*T M Reg. U.S. Pat. Off.

*Now in one instrument...
a safe, soothing high frequency
current for painless sedation
without drugs and a powerful
convulsive current at the
very least as efficient
as the strongest AC machine,
but with increased safety
due to automatically
reduced side effects.*

MODEL SOS REITER SEDAC-STIMULATOR

Now with Model SOS, Reiter SedAc-Stimulator, sedative and convulsive therapies may be given with one machine. A one knob control with a safety spring lock permits simple transition from sedative to convulsive currents.

In ECT, the significantly increased efficiency of the Reiter unidirectional current offers greater therapeutic and convulsive effectiveness.

Patients may be treated so they are quickly clear and bright following treatment... apnea, thrust, agitation and confusion are notably minimized.

The Reiter SedAc current establishes better transference... patients fears are relaxed... they become communicative.

Anxious aversion to EST is greatly minimized by application of the SedAc current prior to treatment. Only the gentle SedAc stimulation is remembered.

Literature available on request.

unwind
patients
gently
with

MODERIL[®]

BRAND OF RESCINNAMINE

a newer, better tolerated alkaloid
of rauwolfia for improved control
of tension.

*preferred by tense patients . . .
side effects are less frequent
and less pronounced*

MODERIL (brand of rescinnamine)
gently brings relief to patients
suffering from anxiety, with less
frequent and less pronounced side
effects than the rauwolfia alkaloids.

who resist EST

POST-CONVULSION SEDAC
for deep sleep

NEUROLOGICAL CONDITIONS

Model SOS contains the Reiter uni-
directional currents and three new
SedAc ranges as part of the single
selector control. Model S is available
without the SedAc-current (may be
used with separate SedAc attach-
ment). The SedAc is also available
as a self-powered instrument.

REUBEN REITER, Sc.D

64 WEST 48th STREET,
NEW YORK 36, N. Y.

*Now in one instrument...
a safe, soothing high frequency
current for painless sedation
without drugs and a powerful
convulsive current at the
very least as efficient
as the strongest AC machine,
but with increased safety
due to automatically
reduced side effects.*

MODEL SOS REITER SEDAC-STIMULATOR

Now with Model SOS, Reiter SedAc-Stimulator, sedative and convulsive therapies may be given with one machine. A one knob control with a safety spring lock permits simple transition from sedative to convulsive currents.

In ECT, the significantly increased efficiency of the Reiter unidirectional current offers greater therapeutic and

Culture Conflict

GEORGENE SEWARD, Ph. D.

This definitive companion volume is invaluable for professional workers in clinical psychology, social work, and psychiatry. It examines the psychodynamics peculiar to the members of a variety of American subcultures.

Reviewing classical psychoanalysis and stressing cultural aspects often overlooked by critics of Freud, the book discusses the neo-Freudian systems and their shift in emphasis from instinct to social relationships. Analyzes the problems of seven representative groups: the Nisei, the Negro, the Italian immigrant, etc., showing how findings presented are adaptable to therapeutic procedures. Judd Marmor, M.D., contributes four illuminating case studies drawn from his own psychoanalytic practice. *Bibliographies.* 299 pp. \$6

HERVEY
Georgia and University Hospitals

A discussion of social, psychological, and literary manifestations of pathologic sexuality. Author examines accepted psychiatric and psychological concepts which he considers unproved — and harmful when used in modern literature to support the belief that sexual disorder, especially homosexual, is natural. 319 pp. \$6.50

Energy and Structure in Psychoanalysis

KENNETH MARK COLBY, M. D., San Francisco
Institute of Psychoanalysis

Exploring basic psychoanalytic theory, book examines the development of the concepts of psychic energy and structure. Demonstrates their usefulness and limitations in approaching theoretical problems. Introduces a new construct of psychic energy and a new cyclic-circular model of psychic structure. 14 ills., 154 pp. \$4.50

THE RONALD PRESS COMPANY

15 East 24th Street, New York 10, New York

unwind
patients
gently
with

MODERIL[®]

BRAND OF RESCINNAMINE

a newer, better tolerated alkaloid
of rauwolfia for improved control
of tension.

*preferred by tense patients . . .
side effects are less frequent
and less pronounced*

MODERIL (brand of rescinnamine)
gently brings relief to patients
suffering from anxiety, with less
frequent and less pronounced side
effects than earlier forms of
rauwolfia therapy.¹⁻⁵ With Moderil
there is reported a reduced incidence
and reduced severity of such side
effects as: depression, diurnal
somnolence, lassitude, weight gain,
bradycardia, fatigue and weakness.¹⁻⁴
It is further reported that an
appreciable number of patients who
complain of mental depression, for
example, while on other forms of
rauwolfia, may be relieved of such
symptoms by changing to rescinnamine
(Moderil).⁴ In a recent comparative
study involving tense patients
"rescinnamine was preferred . . . by
almost all the patients in the trial."⁵

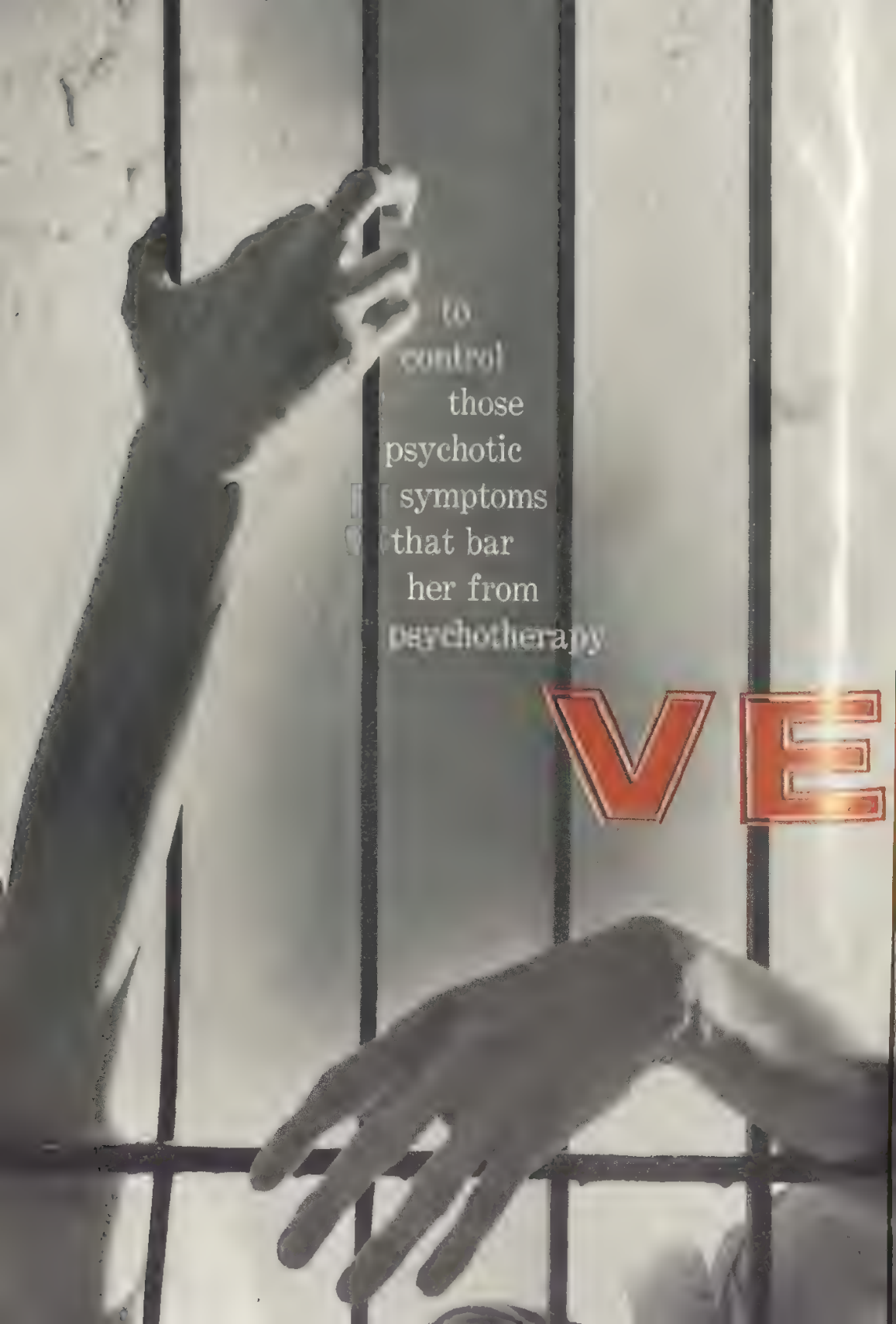
*Supplied: oval, scored, yellow tablets, 0.25
mg. and oval, scored, salmon tablets, 0.5 mg.*

1. Hershberger, R. L.; Dennis, E. W., and Moyer, J. H.:
Am. J. M. Sc. 231:642 (May) 1956. 2. Moyer, J. H.; Dennis,
E. W., and Ford, R.: A.M.A. Arch. Int. Med. 96:630 (Oct.) 1956.
3. McQueen, E. G., and Smirk, F. H.: Postgrad. M. J. 381:85
(Feb.) 1956. 4. Smirk, F. H., and McQueen, E. G.: Lancet 2:119
(July 16) 1955. 5. Hollister, L. E.; Stannard, A. N., and Drake,
C. F.: Dis. Nerv. System 17:229 (Sept.) 1956.

Pfizer

PFIZER LABORATORIES, Brooklyn 6, N. Y.
Division, Chas. Pfizer & Co., Inc.

Trademark



to
control
those
psychotic
symptoms
that bar
her from
psychotherapy

VE

CHEMICALLY IMPROVED — beneficial properties potentiated . . . unwanted effects reduced, through modification of the phenothiazine structure

PHARMACOLOGICALLY IMPROVED — enhanced potency with far less sedative effect

CLINICALLY IMPROVED — does not oversedate the patient into sleepiness, apathy, lethargy . . . active and rapid in controlling manic excitement, psychotic agitation and panic, delusions and hallucinations, hostility, and intractable behavior . . . drug-induced agitation minimal

AND IN EXTENSIVE CLINICAL EXPERIENCE—
SINGULARLY FREE FROM TOXICITY

■ jaundice or liver damage—not observed ■ skin eruptions—rare ■ photosensitivity—rare ■ hyperthermia—rare ■ convulsions—not observed

IN SCHIZOPHRENIA / MANIC STATES / PSYCHOSES ASSOCIATED
WITH ORGANIC BRAIN DISEASE

effects smooth and rapid control of psychotic symptoms —————> facilitates insight —————> permits early introduction of psychotherapy —————> improves patient-personnel relationship —————> hastens social rehabilitation

SPRIN

Squibb Triflupromazine Hydrochloride

the new, improved agent for better
management of the psychotic patient . . .
with greater freedom from toxicity

DOSAGE:

Oral route—usual initial dosage, 25 mg., t.i.d. Adjust dosage according to patient response. (Observe caution in giving daily oral doses in excess of 300 mg.)

Intramuscular route—suggested dosage, 20 mg., t.i.d. (Observe caution in exceeding daily intramuscular doses of 150 mg.)

(See package insert for additional information)

Oral Tablets: 10 mg., 25 mg., 50 mg. press-coated tablets in bottles of 50 and 500

Parenteral Solution: 1 cc. ampuls (20 mg./cc.)

SQUIBB



Squibb Quality—
The Priceless Ingredient

MINIMIZE HAZARDS of E.C.T.

'ANECTINE'®

Chloride brand Succinylcholine Chloride

"...removes practically all
the previous risks inherent
in the treatment."¹⁶

Confirming the contribution of 'Anectine' to safe E.C.T. therapy:

1. Brody, J. I. and Bellet, S.: *Am.J.M.Sc.* 233:40 (Jan.) 1957.
2. Impastato, D. J. and Gabriel, A. R.: *Dis.Nerv.System* 18:334 (Jan.) 1957.
3. Impastato, D. J. and Berg, S.: *Am.J.Psychiat.* 112:893 (May) 1956.
4. Buckley, R. W. and Richards, W. L.: *Ohio State M.J.* 52:481 (May) 1956.
5. Lewis, W. H., Jr.: *Dis.Nerv.System* 17:81 (Mar.) 1956.
6. Moore, D. C. and Bridenbaugh, L. D., Jr.: *Anesthesiology* 17:212 (Jan.) 1956.
7. Jacoby, J., et al.: *J.Clin. & Exper.Psychopathol.* 16:265 (Dec.) 1955.
8. Newbury, C. L. and Etter, L. E.: *A.M.A.Arch.Neurol. & Psychiat.* 74:472 (Nov.) 1955.
9. Newbury, C. L. and Etter, L. E.: *Ibid.* 74:479 (Nov.) 1955.
10. Impastato, D. J.: *J.M.Soc.New Jersey* 52:528 (Oct.) 1955.
11. Lincoln, J. R. and Broggi, F. S.: *New England J.Med.* 253:546 (Sept.) 1955.
12. Tucker, W. I., Fleming, R., and Raeder, O.: *Ibid.* 253:451 (Sept.) 1955.
13. Rietman, H. J. and Delgado, E.: *Dis.Nerv.System* 16:237 (Aug.) 1955.
14. Lewis, W. H., Richardson, D. J., and Gahagan, L. H.: *New England J.Med.* 252:1016 (June) 1955.
15. Glover, B. H. and Roisum, B. H.: *J.Nerv. & Ment.Dis.* 120:358 (Nov.-Dec.) 1951.
16. Saltzman, C., Konikov, W., and Relyea, R. P.: *Dis.Nerv.System* 16:153 (May) 1955.
17. Robie, T. R.: *J.M.Soc.New Jersey* 52:82 (Feb.) 1955.
18. Schiele, B. C. and Margolis, P. M.: *Minnesota Med.* 38:1 (Jan.) 1955.
19. Wilson, W. P., et al.: *A.M.A.Arch.Neurol. & Psychiat.* 72:550 (Nov.) 1954.
20. Steven, R. J. M., et al.: *Anesthesiology* 15:623 (Nov.) 1951.
21. Holt, W. L., Jr.: *New York State J.Med.* 54:1918 (July) 1954.
22. Holmberg, G., et al.: *A.M.A.Arch.Neurol. & Psychiat.* 72:73 (July) 1954.
23. Dewald, P. A., Margolis, N. M., and Weiner, H.: *J.A.M.A.* 154:981 (Mar.) 1954.
24. Wilson, W. P. and Nowill, W. K.: *A.M.A.Arch.Neurol. & Psychiat.* 71:122 (Jan.) 1954.
25. Moss, B. F., Jr., Thigpen, C. H., and Robinson, W. P.: *Am.J.Psychiat.* 109:895 (June) 1953.
26. Holt, W. L., Jr., et al.: *Confinia neurol.* 13:313, 1953.
27. Murray, N.: *Texas Rep.Biol. & Med.* 11:593, 1953.
28. Murray, N.: *Confinia neurol.* 13:320, 1953.
29. Alexander, L., Gilbert, I. E., and White, S. E.: *Ibid.* 13:325, 1953.
30. McDowell, D. H., Rahill, M. A., and Tyndall, J. A.: *J.Irish M.A.* 31:240, 1952.
31. Holmberg, G. and Thesleff, S.: *Am.J.Psychiat.* 108:842, 1952.
32. Altschule, M. D. and Tillotson, K. J.: *New England J.Med.* 238 113 (Jan.) 1948.



BURROUGHS WELLCOME & CO. (U.S.A.) INC., Tuckahoe, N.Y.

**Keep and protect your Journals in this new
VOLUME FILE CASE**

**ATTRACTIVE
INEXPENSIVE
SERVICEABLE**

**Note new price: \$2.50 each:
3 for \$7.00**

**Please add 25 cents postage for each
file ordered**

ORDER DIRECT FROM

**AMERICAN JOURNAL OF PSYCHIATRY
1270 Avenue of the Americas
New York 20, N. Y.**

WHEN ORDERING PLEASE SPECIFY VOLUME NUMBERS



A NEW BIOCHEMICAL CEREBRAL TONIC

GLUTAVITE®

in confusion, mental fatigue, and anxiety

L-Glutavite, directed at improvement of oxidation and cellular nutrition in the brain, supplies optimal amounts of monosodium l-glutamate. This is the most readily utilized form of glutamic acid, the only amino acid with specific beneficial effects on cerebral metabolic processes. A therapeutic amount of niacin, for its vasodilating effect on cerebral blood vessels, is also provided in combination with an optimal supply of riboflavin, thiamine, pyridoxine and ascorbic acid to enhance cellular nutrition.

L-Glutavite offers a more fundamental, broader and safer range of action than pharmacologic stimulants,

sedatives or tranquilizing agents. Clinical studies show that symptoms of fatigue, apathy, and depression are often ameliorated within 4 to 6 weeks of starting therapy.^{1,2,3,4}

Initial Dosage: One packet (supplied in 30's) or two level spoonfuls (supplied in 6 oz. containers) in tomato or vegetable juice four times a day. Maintenance dosage: reduce to twice a day.

References: 1. Finke, L. P., and Ryan, L. J.: *J. Clin. & Ex. Psychopath.* 19:7 (Jan-Mar) 1958. 2. Barrabee, P.; Wingate, J., Phillips, B. D., and Goodblatt, M. *Postgrad. Med.* 16:485 (May 1954). 3. Kato, T. M., and Kowalczyko, Z.: *Internat. Rev. Med.* 166 (1954). 4. Cline, J. J., and M. A.: *Sci.* 99:2 (Aug.) 1957.

Crookes-Barnes Laboratories, Inc., Wayne, N.

A STATEMENT CONCERNING MARSILID

BY THE PRESIDENT OF HOFFMANN-LA ROCHE INC.

Dear Doctor:

At a time when Marsilid has been so much in the news, I believe you will be interested in this statement. It is being made with the utmost candor because it has never been our policy to emphasize advantages of a drug while ignoring its disadvantages.

Marsilid, as most physicians know, is a highly potent compound of an entirely new type...unlike anything else known to clinical medicine. Its potency and its activity in the body have important implications. It has been described as a psychic energizer (the opposite of a tranquilizer) which acts by inhibiting monoamine oxidase and other enzymes. Marsilid frequently has a profound effect in severely depressed and regressed patients but it is definitely not a "pep" pill, as this term has been frequently used by the lay press.

Marsilid is the first of a series of amine-oxidase inhibitors developed by Roche research which are now being studied and tested with extreme care.

Because Marsilid is so potent, it should be used only in the right patient, in the correct dosage and in the proper way. This is by way of saying that it is most important to follow directions* carefully. We believe that the use of Marsilid should be restricted to patients who have not responded to less potent drugs...patients who are sufficiently depressed to warrant administration of a potentially hazardous compound.

It is particularly important to use Marsilid in the correct dosage and to keep in mind its slow and cumulative action. The lowest effective dose should, of course, be employed at all times. When and if improvement occurs, the dose should be reduced to the lowest level adequate to maintain the patient.

Marsilid has been under clinical investigation since 1952—first for tuberculosis and subsequently for its effect on mental disease and other disorders. Over fifty papers on the new indications for Marsilid have appeared in the literature during the last year alone and hundreds of additional studies are now under way. These studies show that Marsilid and other amine-oxidase inhibitors may be valuable not only in mental disorders but in many other conditions as well.

*The dosage recommendations, directions and contraindications in the package insert should be carefully reviewed. Copies of this up-to-date literature (recently mailed to every practicing physician) may be obtained by writing to S. Evert Svenson, M. D., Director of Medical Information, Hoffmann-La Roche Inc., Nutley 10, N. J.

MARSILID®—brand of iproniazid

Because Marsilid is so potent, it is to be expected that its use may be followed by reactions in some patients. But in the opinion of many investigators, the benefits of Marsilid in properly selected patients outweigh its disadvantages. For example, Marsilid has produced impressive improvement in some patients refractory to other drugs or electroshock.

Inasmuch as Marsilid affects several enzyme systems, it is capable of producing undesirable side effects such as hypotension, jaundice and hepatitis. All patients should therefore be kept under the closest possible observation and the use of the drug should be discontinued at the first indication of jaundice, impaired liver function or other serious side reactions.

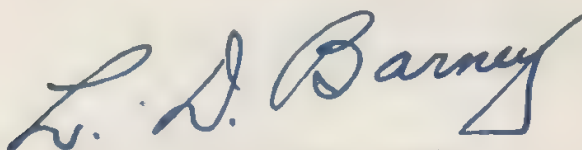
Marsilid has, according to our records, been used satisfactorily in several hundred thousand patients. But we realize that those patients who have not benefited or who have suffered side effects are to be recognized and our medical and scientific people are making every effort to learn more about the behavior of Marsilid in such cases.

Like steroids and antibiotics, Marsilid represents a genuine advance in medical research. As is true of all new potent drugs, much additional work is needed before the therapeutic effects and limitations are completely clarified. In the meantime, we believe that the therapeutic benefits of Marsilid should be made available to properly selected patients, provided the drug is used with full awareness of its potency and limitations.

Our Department of Medical Research stands ready to communicate with physicians by phone or by mail whenever additional information is required. We shall be happy to receive frank statements of practicing physicians or research scientists regarding their experience with Marsilid, whether unfavorable or favorable.

May I assure you that all of us in the Roche Management as well as our medical and scientific people are deeply aware of our responsibility to the medical profession in the development and testing of new and potent compounds and we are determined to continue our research in this field. We believe that only by this procedure will there be additional breakthroughs in the treatment of diseases which have hitherto not been treated with maximum success.

Sincerely,

A handwritten signature in blue ink, reading "L. D. Barney". The signature is fluid and cursive, with a large, stylized "B" at the end.

L. D. BARNEY, *President*
Hoffmann-La Roche Inc.

now available the parenteral form **Trilafon** Injection

perphenazine

full-range tranquilizer

potent antiemetic

*greater milligram potency than
other parenteral phenothiazines*

*virtually no significant hypotension
no agranulocytosis reported
no skin photosensitivity observed
pain on injection virtually absent*

for control of

agitated psychotics
manic states
catatonic excitement
hysteria
agitated senile dementia
panic reactions
acute behavioral problems in mental defectives
agitated or withdrawal phase of acute alcoholism

TRILAFON Injection—5 mg., ampul of 1 cc.,
boxes of 6 and 100.

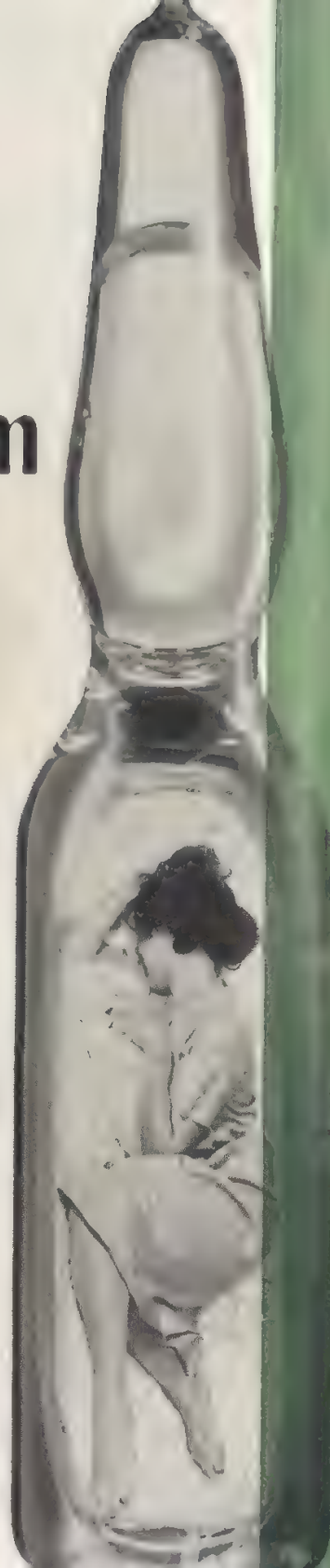
TRILAFON Tablets for hospital use—16 mg., (red seal),
bottle of 500.

Refer to Schering literature for specific
information regarding indications, dosage,
side effects, precautions and contraindications.

TR-J-516

Schering

SCHERING CORPORATION • BLOOMFIELD, NEW JERSEY



WHEN A MAN
IS MENTALLY
AN ICEBERG
RESTORE
EMOTIONAL
WARMTH



The schizophrenic's cold, rigid and irrational emotional tone melts away as Pacatal restores emotional warmth. Lack of responsiveness is one of the many symptoms which Pacatal corrects by normalizing thinking and emotional patterns. Many investigators report a return of warmth and improved affect.^{1,2,3}

PACATAL...

- "normalizes" thinking and emotional responses
- calms without "flattening"—keeps patients alert
- elevates the mood instead of sedating the patient

complete literature available on request

References

1. Flipse, M. J.: Clin. Med. 4:1237 (Oct.) 1957. 2. Hutchinson, J. T.: Paper presented, American Psychiatric Association, Philadelphia, Pa., Nov. 17, 1956.
2. Sarwer-Foner, G. J., and Koranyi, E. K.: Canad. M. A. J. 77:450 (Sept. 1) 1957.

FOR NORMALIZATION—NOT SEDATION

Pacatal[®]
BRAND OF MEPAZ NE

WARNER-CHILCOTT

Dim hopes and grave doubts need
no longer be a part of the epileptic's life.
Today's clinical advances, coupled with
your increasing knowledge of therapy, may
give the epileptic what he dared not
hope for in the past: a normal life.
These five distinguished anticonvulsants
can help you treat the epileptic—from
childhood on through his adult years. They
will help you give him the safety,
comfort and security that comes only
with a seizure-free life.

Abbott

Your greatest gift to him...

A
LIFE
OF
FREEDOM



805107

ANTICONVULSANTS BY ABBOTT

PEGANONE® (Ethotoin, Abbott)

Newest of Abbott's anti-convulsants... a new hydantoin of exceptionally low toxicity for grand mal and psychomotor seizures.

PHENURONE® (Phenacemide, Abbott)

Used with discretion, will often prove successful where all other therapy fails in treating psychomotor, grand mal, petit mal and mixed seizures.

GEMONIL® (Metharbital, Abbott)

An effective drug with low toxicity for treating grand mal, petit mal, myoclonic and mixed seizures symptomatic of organic brain damage.

TRIDIONE® (Trimethadione, Abbott) PARADIONE® (Paramethadione, Abbott)

Two eminently successful anticonvulsants for symptomatic control of petit mal, myoclonic and akinetic seizures... Tridione will often work where Paradione won't and vice versa.

READ MEDICAL HISTORY

"Our work rests on the accomplishments of our predecessors."
—Philip S. Hench in the Foreword to **PICTORIAL HISTORY OF MEDICINE**

A PICTORIAL HISTORY OF MEDICINE

by Otto L. Bettmann, M. D., New York City

"Perhaps nowhere else can one obtain so clearly and quickly a broad grasp of medical history. The **hundreds of illustrations** depict in their well chosen selection the **highlights** in medical practice through the centuries. . . . This is not, however, simply a picture book, but a series of **brief historical essays** dealing with those events and conditions of practice which characterize periods of medical development."—*Surgery, Gynecology and Obstetrics*

Pub. '57, 336 pp., 1000 il., Cloth, \$9.50

SELECTED WRITINGS OF WALTER E. DANDY

Compiled by Charles E. Troland, M. D., and Frank J. Otensack, M. D.

Compiled with a dual purpose: To honor the memory of Doctor Walter E. Dandy and to **make available many of his writings not obtainable from other sources.** Certainly all neurosurgeons and neurologists should have this book, both as a historical volume and because of the ready availability of information. "... these collected papers can be recommended to all interested in the development of neurologic concepts and neurosurgical techniques for the alleviation of diseases of the nervous system." *Neurology*

Pub. '57, 800 pp., 183 il., Cloth, \$15.00

THE FOUNDERS OF NEUROLOGY

by Webb Hayeshee, M. D., Armed Forces Institute of Pathology

"It is to be expected that a book of this type will be of primary interest to one particular physician—the neurologist. However, anyone desiring to penetrate medical history somewhat deeper than the average will find it of interest and value. This volume is **highly recommended** as a historical review of the background of present-day neurology."—*Northwest Medicine*

Pub. '53, 512 pp., 133 il., Cloth, \$10.50

AMID MASTERS OF TWENTIETH CENTURY MEDICINE

by Leonard G. Rowntree, M. D., SCD., FACP, University of Minnesota

Lavishly illustrated, this book is all inclusive for the century. It starts with the conquest of Yellow Fever by two army surgeons, Walter Reed and General William Gorgas, in the Spanish American war and ends with the introduction of polio vaccine by Jonas Salk and the discovery of a brand new disease (Primary Aldosteronism) by Jerome Conn of the University of Michigan in 1956.

To be published summer 1958

HALSTED OF JOHNS HOPKINS

by Samuel James Crowe, M. D., The Johns Hopkins University

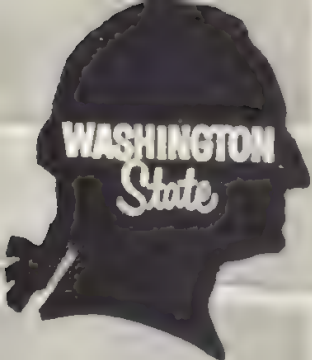
"Within these pages much of the old which is of established value is recorded and glimpses into the beginnings of **what we do daily** today in the wards, operation room, and experimental laboratory are found. The book is one of the most **delightful collective accounts** of men in medicine."—*Hawaii Medical Journal*

Pub. '57, 268 pp., 24 il., Cloth, \$5.00

CHARLES C THOMAS • PUBLISHER

301-327 EAST LAWRENCE AVENUE

SPRINGFIELD • ILLINOIS



... building upon a solid foundation
of public and legislative approval
has provided the

bricks...

with which to build a progressive
and lasting mental health
treatment and research program ...
it now seeks the

brains...

to aid in carrying this program forward.

If you are a member of that dedicated group of psychiatrists and other professionals devoted to the field of mental health, the evergreen, evergrowing State of Washington urgently beckons you to join this dynamic, pace-setting program ... to become a part of this important forward movement in the field of mental health.

Recently approved salary increases place Washington at the top in most professional categories and are an indication of the efforts being made to carry this program through — but this is only part of the story of progress in this fabulous green giant of the Pacific Northwest ... you may learn more of this remarkable story and further details regarding the part you may play in it by contacting:

WASHINGTON STATE DEPARTMENT OF INSTITUTIONS

DR. GARRET HEYNS, DIRECTOR • BOX 867, OLYMPIA, WASHINGTON

DR. CHARLES H. JONES, SUPERINTENDENT
NORTHERN STATE HOSPITAL
SEDOO WOOLLEY, WASHINGTON

DR. G. LEE SANDRITTER, SUPERINTENDENT
EASTERN STATE HOSPITAL
MEDICAL LAKE, WASHINGTON

DR. MARGARET KENNARD, DIRECTOR
MENTAL HEALTH RESEARCH INSTITUTE
P. O. BOX 1670
FORT STEILACOOM, WASHINGTON

DR. FRANK E. SHOVLAIN, SUPERINTENDENT
WESTERN STATE HOSPITAL
FT. STEILACOOM, WASHINGTON

Founded in 1904

HIGHLAND HOSPITAL, INC.

ASHEVILLE, NORTH CAROLINA
Affiliated with Duke University

A non-profit psychiatric institution, offering modern diagnostic and treatment procedures—insulin, electroshock, psychotherapy, occupational and recreational therapy—for nervous and mental disorders. The Hospital is located in a 75-acre park and the scenic beauties of the Smoky Mountain Range of Western North Carolina, affording exceptional opportunity for physical and nervous rehabilitation. The OUT-PATIENT CLINIC offers diagnostic services and therapeutic treatment for selected cases desiring non-resident care.

R. CHARMAN CARROLL, M.D. ROBT. L. CRAIG, M.D.
Medical Director *Associate Medical Director*
JOHN D. PATTON, M.D.
Clinical Director

MILWAUKEE SANITARIUM FOUNDATION, INC.

WAUWATOSA, WIS. Established 1911 VIRGINIA

Maintaining the highest standards since 1884, the Milwaukee Sanitarium Foundation continues to stand for all that is best in the physiological and psychotherapeutic treatment of neuropsychiatric disorders. Literature sent on request.

CARROLL W. OSGOOD, M.D.
Medical Director

BENJAMIN A. RUSKIN, M.D.
Asso. Medical Director

WILLIAM T. KRADWELL, M.D.

LEWIS DANZIGER, M.D.

JAMES A. ALSTON, M.D.

EDWARD CARL SCHMIDT, M.D.

WILLIAM L. LORTON, M.D.

DONALD G. IVES, M.D.

ISAAC J. SARFATTY, M.D.

PATRICIA JORDAN, M.D.

EDWARD A. BIRGE, M.D.

WALDO W. BUSS, *Executive Director*

COLONIAL HALL—One of the 17 units in "Cottage Plan"

Staff PAUL V. ANDERSON, M.D., *President*
REX BLANKINSHIP, M.D., *Medical Director*
JOHN R. SAUNDERS, M.D., *Assistant Medical Director*
THOMAS F. COATES, M.D., *Associate*
JAMES K. HALL, JR., M.D., *Associate*
CHARLES A. PEACHEE, JR., M.S., *Clinical Psychologist*

R. H. CRYTZER, *Administrator*

Sent On Request - P. O. Box 1514 - Phone 5-3245



CLIMATE AIDS IN THERAPY

SUNSHINE 360 DAYS OF THE YEAR!



ANCLOTE MANOR

A MODERN HOSPITAL FOR
EMOTIONAL READJUSTMENT

TARPON SPRINGS • FLORIDA
ON THE GULF OF MEXICO



- Modern Treatment Facilities • Psychotherapy Emphasized • Large Trained Staff • Individual Attention • Capacity Limited • Occupational and Hobby Therapy • Supervised Sports • Religious Services Plus ...

Your patients spend many hours daily in healthful outdoor recreation, reviving normal interests and stimulating better appetites and stronger bodies ... all on Florida's Sunny West Coast.

Rates Include All Services and Accommodations
Brochure and Rates Available to Doctors and Institutions

Medical Director—SAMUEL G. HIBBS, M.D.
Assoc. Medical Director—
WALTER H. WELLBORN, JR., M.D.
PETER J. SPOTO, M.D. ZACK RUSS, JR., M.D.
ARTURO G. GONZALEZ, M.D.
Consultants in Psychiatry
SAMUEL G. WARSON, M.D. ROGER E. PHILLIPS, M.D.
WALTER H. BAILEY, M.D.
Phone: VICTOR 2-1811

YY Y W

State of Washington in
this dynamic, pace-setting
a part of this important
field of mental health.

DUKE

Recently approved salary active treatment, analytically.
ton at the top in most somatic therapies.
are an indication of the
this program through with a trained staff offers
story of progress in this recreation. Full program of
Pacific Northwest ... daily psychiatric and medical
remarkable story and part you may play in it

on 120 acres of Connecticut

WASHINGTON STATE DEPARTMENT

DR. GARRET HEYNS, DIRECTOR • BOX 867

Westport, Capital 7-5105

DR. CHARLES H. JONES, SUPERINTENDENT
NORTHERN STATE HOSPITAL
SEDRO WOOLLEY, WASHINGTON

DR. G. EASTER
MEDICAL

el Bernard, Administration

DR. MARGARET KENNARD DIRECTOR
MENTAL HEALTH RESEARCH INSTITUTE
P. O. BOX 1670
FORT STEILACOOM, WASHINGTON

DR. FR
WESTE
FT. ST

rk, N. Y., LEhigh 5-5155

HIGH POINT HOSPITAL

Port Chester, New York

WEStmore 9-4420

Ratio of one active psychiatrist for every four to five patients; each patient receives absolute minimum of three hours of psychoanalytic psychotherapy per week; highly individualized management, shock and drug therapies used adjunctively; therapy given by senior psychoanalysts, and resident psychiatrists under immediate supervision of the Director; staff of medical consultants; near New York City.

ALEXANDER GRALNICK, M.D., F.A.P.A., *Director*

Chief Consultants

STEPHEN P. JEWETT, M.D.
WILLIAM V. SILVERBERG, M.D., F.A.P.A.

Associate Consultants

RUTH FOX, M.D.
L. CLOVIS HIRNING, M.D.

Assistant Medical Director

FRANK G. D'ELIA, M.D.

Clinical Director

MERVYN SCHACHT, M.D., F.A.P.A.

Director of Research

STEPHEN W. KEMPSTER, M.D.

Resident Psychiatrists

GUY LEDUC, M.D.

EDWIN L. RABINER, M.D.

ENRIQUE MARTINEZ, M.D.

Research Consultant

MORTON F. REISER, M.D., F.A.P.A.

Psychologists

LEATRICE STYRT SCHACHT, M.A.
MILDRED SHERWOOD LERNER, M.A.

CONSULTANTS

H. HAROLD GIBB, M.D., F.A.C.S., *Gynecology*
FRANK J. MASSUCCO, M.D., F.A.C.S., *Surgery*
ARNOLD J. RODMAN, M.D., F.C.C.P., *Internal Medicine*
NATHANIEL J. SCHWARTZ, M.D., F.A.C.P., *Internal Medicine*
IRVING J. GRALNICK, D.D.S., *Dentistry*

ASSOCIATE PSYCHIATRISTS

LEONARD C. FRANK, M.D.
SYLVIA L. GENNIS, M.D.
LEONARD GOLD, M.D., F.A.P.A.
DANIEL L. GOLDSTEIN, M.D., F.A.P.A.
SIMON H. NAGLER, M.D.
J. WILLIAM SILVERBERG, M.D.

Westbrook Sanatorium

RICHMOND

Established 1911

VIRGINIA

A private psychiatric hospital employing modern diagnostic and treatment procedures—electro shock, insulin, psychotherapy, occupational and recreational therapy—for nervous and mental disorders and problems of addiction.

Staff

PAUL V. ANDERSON, M.D., *President*
REX BLANKINSHIP, M.D., *Medical Director*
JOHN R. SANDERS, M.D., *Assistant Medical Director*
THOMAS F. COATES, M.D., *Associate*
JAMES K. HALL, JR., M.D., *Associate*
CHARLES A. PEACHEE, JR., M.S., *Clinical Psychologist*

R. H. CRYTZER, *Administrator*

Brochure of Literature and Views Sent On Request - P. O. Box 1514 - Phone 5-3245



FOR THE MENTALLY RETARDED CHILD

SIX COMPREHENSIVE PROGRAMS



- Observation and Diagnosis
- Education and Training
- Residential Supervision
- Custodial Care
- Summer Program
- Psychiatric Treatment Center

Established 1888, The Training School at Vineland provides care and treatment for boys and girls 2 years or older with mental potential of 6 years. Complete professional staff. Electroencephalographic and neurological exams, individual psychiatric, psychological, physiological, and speech observations and therapies.

The educational program aims at maximum development of each child. Training includes self-care; group living; formal classroom education; development of practical habits, attitudes and work skills.

Children live in homelike cottages on 1600-acre estate. Hospital school, chapel, lake, swimming pools, working farm.

Research Laboratory famed for continuous study of causes, prevention and treatment of mental retardation.

For information write: Box N,

THE TRAINING SCHOOL AT VINELAND, NEW JERSEY

THE BROWN SCHOOLS FOR EXCEPTIONAL CHILDREN

The Brown Schools, operated since 1940, has facilities for the residential treatment of emotionally disturbed children and the training and education of exceptional children of all ages. Specialists on our staff in psychiatry, psychology, medicine, social work, speech pathology, and special education assure a well-rounded approach to the problems of the exceptional child. With seven different units, located in Austin and San Marcos, Texas, it is possible for each child to be placed in the group best suited to his age, ability, development and social adjustment. Each student's program is fitted to his individual needs and abilities and includes the regular academic subjects as well as electives and vocational training where indicated. Classes are held on the grounds but use is also made of the local public schools. The children enjoy a full social and recreational schedule with weekly parties, off-campus trips, and participation in regular Boy Scout and Girl Scout work. During the summer there is continued academic training given when indicated, combined with a camp recreational program. A friendly, informal atmosphere characterizes the student's life at school and each child is given individual attention and guidance to help him achieve a happy and useful life.

FOR INFORMATION WRITE

Nova Lee Dearing, Registrar
Post Office Box 4008, Austin, Texas

ANNOUNCING

MODEL 109 ELECTRONARCOSIS INSTRUMENT

After the introduction of our model 108 in 1951, many minor, annual improvements were made in these instruments.

Model 109, although essentially the same instrument, incorporating every improvement made during the long and successful history of the model 108, has desirable longevity improvements, and other additions and changes made to comply with the suggestions of an official testing laboratory, and to secure its seal of approval.

We know of no other shock or electronarcosis instrument that carries an official seal of approval. We have searched the U.L. catalogs and made inquiry of other equivalent testing laboratories and have found none.

Owners of our model 108 instruments may have these model 109 changes and additions made in our shop. A thirty-month guarantee is given on reworked instruments.

We are filling current orders with model 109. No change in price.

Electronicraft Corporation

504 West Huntington Drive
Arcadia, California
Tel: HIlcrest 6-1003
Cable address: Glissando



The BRETT SCHOOL DINGMANS FERRY, PENNSYLVANIA

In the Foothills of the Poconos

Intensive, highly individualized personal training for a small group of girls over five years of age. Carefully chosen staff. Special modern teaching techniques and program of therapeutic education. Varied handicrafts, cooking, nature study and field trips. Outdoor games, picnics and other activities. Comfortable, homelike atmosphere. Close cooperation with family physician. 70 miles from New York City.

Telephone Dingmans Ferry 8138

References

Directors: Frances M. King, formerly Director of the Seguin School
Catherine Allen Brett, M.A.

—IMPORTANT—

WE ARE DESIROUS OF OBTAINING COPIES OF THE FOLLOWING
NUMBERS:

WE WILL PAY \$1.50 FOR THE FOLLOWING NUMBERS:

Volume 1 to Volume 83 (all Numbers)

WE WILL PAY \$1.00 FOR THE FOLLOWING NUMBERS:

Volume 90 Number 1
Volume 91 Number 4
Volume 93 Number 4
Volume 94 Number 4
Volume 95 Numbers 1 and 4
Volume 99 Numbers 4, 5, and 6
Volume 100 Numbers 2, 3, 4, and 5
Volume 101 Numbers 1, 2, 3, 4, 5, and 6
Volume 103 Number 5
Volume 104 Number 7
Volume 106 Number 9
Volume 110 Number 1
Volume 111 Number 9
Volume 113 Number 7

SEND TO:

AUSTIN M. DAVIES, BUS. MGR.
AMERICAN JOURNAL OF PSYCHIATRY
1270 Ave. of The Americas, Rm. 310
New York 20, New York

BALDPATE, INC.

Geo. Fleetwood 2-2131

Georgetown, Mass.

Located in the hills of Essex County, 30 miles north of Boston

For the treatment of
psychoneuroses, personality disorders, psychoses, alcoholism and drug addiction.
Definitive psychotherapy, somatic therapies, pharmacotherapy, milieu-therapy under
direction of trained occupational and recreational therapists.

HARRY C. SOLOMON, M.D.
Consulting Psychiatrist

GEORGE M. SCHLOMER, M.D.
Medical Director

THE EMORY JOHN BRADY HOSPITAL

401 SOUTHGATE ROAD, COLORADO SPRINGS, COLORADO

MElrose 4-8828

For the care and treatment of Psychiatric disorders.

Individual and Group Psychotherapy and Somatic Therapies.

Occupational, diversional and outdoor activities.

X-ray, Clinical Laboratory and Electroencephalography.

E. JAMES BRADY, M.D., *Medical Director*

C. F. RICE, *Superintendent*

FRANCIS A. O'DONNELL, M.D.

THOMAS J. HURLEY, M.D.

GEORGE E. SCOTT, M.D.

ROBERT W. DAVIS, M.D.

BRIGHAM HALL HOSPITAL

CANANDAIGUA, NEW YORK

FOUNDED 1855

Individual psychotherapy, occupational and recreational programs, shock
therapy, selected cases of alcoholism and addiction accepted.

Special consideration for Geriatric cases.

HOWARD W. BERG, M.D., *Medical Director*

CEDARCROFT SANITARIUM & HOSPITAL, INC.

12,101 COLUMBIA PIKE, SILVER SPRING, MD.

HEmlock 4-0200

Nine miles from Washington, D. C. — In rural Maryland

Dedicated to the Care of neuropsychiatric disorders requiring special supervision and guidance.
Individual and group psychotherapy, occupational and activity therapy emphasized. All other
accepted therapies are available.

H. E. Andren, M.D.
Medical Director

Member of N^o A. P. P. H.

Accredited by Joint Commission on Accreditation of Hospitals

COMPTON SANITARIUM
820 WEST COMPTON BOULEVARD
COMPTON, CALIFORNIA

and its Psychiatric Day Hospital facility

BEVERLY DAY CENTER

9256 Beverly Boulevard
Beverly Hills, California

High Standards of Psychiatric Treatment Serving the Los Angeles Area

G. CRESWELL BURNS, M.D.
Medical Director

HELEN RISLOW BURNS, M.D.
Assistant Medical Director

FAIR OAKS

Incorporated

SUMMIT, NEW JERSEY

A 70-BED MODERN, PSYCHIATRIC HOSPITAL FOR
INTENSIVE TREATMENT AND MANAGEMENT OF
PROBLEMS IN NEUROPSYCHIATRY

20 MILES FROM NEW YORK CITY

TELEPHONE CRestview 7-0143

OSCAR ROZETT, M. D.,
Medical Director

THOMAS P. PROUT, JR.
Administrator

Established

FALKIRK IN THE RAMAPOS
CENTRAL VALLEY, N. Y.

1889

TELEPHONE: HIGHLAND MILLS, NEW YORK, WABASH 8-2256

A private hospital devoted to the individual care of psychiatric patients. Falkirk provides a twenty-four hour admission service for acute psychiatric problems. Out-patient facilities are available for suitable cases. A continued treatment service is maintained.

Members of the medical profession are invited to visit the hospital and inspect the available services.

Located 2 miles north of the Harriman Exit N. Y. State Thruway
50 miles from N. Y. C.

T. W. NEUMANN, SR., M. D.,
Physician in Charge

PERCY E. RYBERG, M. D.,
Clinical Director

T. W. NEUMANN, JR., M. D.,
Physician in Charge

THE HAVEN SANITARIUM INC.
ROCHESTER, MICHIGAN

M. O. WOLFE, M.D.
Director of Psychotherapy

RALPH S. GREEN, M.D.
Clinical Director

GRAHAM SHINNICK
Manager

A psychoanalytically-oriented hospital for the
treatment of mental and emotional illnesses.

Telephone: ☎Live 1-9441

RING SANATORIUM

EIGHT MILES FROM BOSTON

Founded 1879

For the study, care, and treatment of emotional, mental, personality, and habit disorders. On a foundation of dynamic psychotherapy all other recognized therapies are used as indicated.

Cottage accommodations meet varied individual needs. Limited facilities for the continued care of progressive disorders requiring medical, psychiatric, or neurological supervision.

Full resident and associate staff. Courtesy privileges to qualified physicians.

BENJAMIN SIMON, M. D., Director

CHARLES E. WHITE, M. D., Assistant Director

Arlington Heights, Massachusetts

Mission 8-0081

Fully Accredited by the APA and the Joint Commission on Accreditation of Hospitals

RIVER CREST SANITARIUM

NEW YORK CITY

Founded 1896

Modern Facilities for the individual care and treatment of nervous, mental, alcoholic and geriatric patients. All recognized therapies available according to the needs of the individual patient.

Courtesy privileges to qualified physicians.

American Hospital Association Member.

Approved for residency training in psychiatry.

Layman R. Harrison, M. D.
Medical Director

Martin Dollin, M. D.
Clinical Director

Sandor Lorand, M. D.
Director of Psychotherapy

Astoria 5, New York

Twenty Minutes from Mid-Manhattan

AStoria 8-8442

Phone:

CHestnut 7-7346

WINDSOR HOSPITAL

A Non Profit Corporation

Established

1898

CHAGRIN FALLS, OHIO

A hospital for the treatment of Psychiatric Disorders. Booklet available on request.

JOHN H. NICHOLS, M. D.
Medical Director

G. PAULINE WELLS, R. N.
Administrative Director

HERBERT A. SIHLER, JR.
Secretary

MEMBER: American Hospital Association - Central Neuropsychiatric Hospital Association - National Association of Private Psychiatric Hospitals

Accredited: by the Joint Commission on Accreditation of Hospitals

ENTER NEW SUBSCRIPTIONS AND RENEWALS ON THIS FORM

AMERICAN JOURNAL OF PSYCHIATRY
1270 AVENUE OF THE AMERICAS, ROOM 310
NEW YORK 20, NEW YORK

19
Date

Enclosed herewith is \$..... for one year's subscription to the AMERICAN JOURNAL OF PSYCHIATRY beginning with Volume Number

NAME
Print

ADDRESS

SIGNATURE

Subscription \$12.00 a year or by the Volume. Foreign Postage \$1.00 extra. Canada and South America Postage \$.50 extra. New Volume begins July 1958 issue.